Scope and limitations of a capability-based measure of job quality in Central America

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Preface

This thesis describes the work carried out in the Department of Sociology from January 2014 to January 2018. The dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except where specifically indicated in the text. It is not substantially the same as any that I have submitted at any time, or, is being concurrently submitted for a degree, diploma or other qualification at the University of Cambridge, or any other University or similar institution. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution.

The dissertation does not exceed the word limit of 80,000 as prescribed by the Degree Committee for the Faculty of Human, Social and Political Sciences.

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Abstract

In Latin America, the debate on what constitutes a 'good' or 'bad' job has been dominated by the phenomenon of informality. Indicators like the 'informal sector size' or the proportion of workers in 'informal employment' give little attention to the intrinsic features of jobs that affect workers' well-being, thus misleading policy efforts. Validation of alternative and comparable human-centred measures of job quality (JQ) is needed.

This study aims to evaluate the validity of a multi-dimensional measure of JQ in developing countries, and its usefulness against narrow indicators of formality/informality. To this end, Sen's capability-approach is used along with Green and Mostafa's operationalisation of JQ (Eurofound, 2012), which considers dimensions as varied as earnings, career prospects, autonomy, intensity, social environment, physical environment, and working time.

With Central America as the research setting, I address four questions: (1) does Eurofound's indicator capture JQ inequalities at the individual level? (2) Can we draw meaningful comparisons between countries about their ability to provide good jobs? (3) Are the selected features of what constitutes a good job positively associated with Central American workers' well-being? (4) Is the concept of JQ attuned with what local experts conceive as a 'good job'? The research uses a mixed-methods approach to analyse the First Central American Survey on Working Conditions and Health – conducted in 2011 in Panama, Costa Rica, Nicaragua, Honduras, El Salvador and Guatemala – in addition to semi-structured interviews with selected informants from these six countries.

The results obtained show, firstly, a reasonable distribution of JQ across groups of workers. They confirm that formal jobs are not ubiquitously the best quality jobs. Secondly, the results evidenced significant variation at the country level regarding earnings and intrinsic job quality, with Costa Rica often ranking at the top. Interestingly, JQ rankings do not always follow from countries' industrial structure, economic performance, informal sector size, or other developmental indicators of common usage; country differences in JQ appear associated with the practical enforcement capacity of labour institutions like trade unions, inspection systems, and the state itself. Thirdly, I corroborated that the selected job features have a positive impact on Central American workers' well-being (except, puzzlingly, for work-time related aspects). Moreover, the positive health effect associated with performing in an intrinsically good job proved to be greater than the effect of working formally. Lastly, I confirmed that local perspectives about what constitutes a 'good job' are in great part consistent with the features included in Green and Mostafa's JQ scheme, while other intrinsic dimensions of the framework have struggled to enter the public discourse.

These findings indicate that a JQ framework is generally valid in the Central American context, and provides more information than a conventional indicator of informality. The study contributes to extend the capability approach to the realm of work and to stress its potential for international comparative research. It is recommended that countries collect richer data about those aspects of jobs that have been proven to affect workers' well-being significantly and are not revealed in unidimensional informality figures.

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Abbreviations

BIT	Bilateral investment treaty
CA	Capability Approach
CAFTA-DR	Dominican Republic-Central America Free Trade Agreement
ECCTS	Encuesta Centroamericana sobre Condiciones de Trabajo y Salud (Central American Survey on Working Conditions and Health)
ECLAC	Economic Commission for Latin America and the Caribbean
EPZ	Export processing zone
EWCS	European Working Conditions Survey
FDI	Foreign direct investment
FTA	Free trade agreement
FTZ	Free trade zone
GDP	Gross domestic product
HDI	Human Development Index
IJQ	Intrinsic job quality
ILO	International Labour Organisation
ISCO	International Standard Classification of Occupations
JQ	Job quality
LIS	Labour inspection system
NGO	Non-governmental organisation
OSH	Occupational safety and health
PPP	Purchasing power parity
TNC	Transnational corporation
WTQ	Working time quality

ISO Alpha-3 country codes

CRI	Costa Rica
SLV	El Salvador
GTM	Guatemala
HND	Honduras
NIC	Nicaragua
PAN	Panama

1 Introduction

1.1 The research problem

The transformations in the organisation and content of work and its concomitant impact on workers' well-being have captured researchers' attention for a long time. Although there is no question as to the relevance of work and employment as constitutive of human well-being, the varying degrees and directions of their impact on workers' welfare are not as clear as many policymakers would desire. In this study, the measure of the extent to which a job enables workers' and their families' well-being is what I will refer to as 'job quality' (from now on 'JQ').

As its name denotes, JQ differs markedly from indicators of 'job quantity' such as rates of employment, unemployment and labour underutilisation. Especially in less advanced economies, policymakers persistently use measures of job quantity as signs of a nation's development; while the attention paid to the quality of jobs continues to be deficient. On occasion, both concepts are used interchangeably in the public discourse, even though the evidence has made it clear that the mere availability of employment does not always lead to better well-being. What is more, the literature continuously provides additional evidence on the idea that being employed in poor conditions can be more damaging for health than being unemployed (Burchell, 1992; Chandola & Zhang, 2018; Kim & von dem Knesebeck, 2015). If at all, employment rates tell more about the quality of the labour market than of the job per se (Burchell et al., 2014).

As understood here, JQ also diverges from the notion of labour productivity on which some mainstream economists may be more interested. Although quality jobs are likely to have a positive impact on economic growth and productivity outputs per worker or hour worked (Weller & Roethlisberger, 2011), both concepts must be differentiated. Rather than focusing directly on the well-being of workers and essential job features, productivity indicators concern the overall performance of labour markets and national economies. One could argue that the salary level, which is considered an essential element to assess how good jobs are, is also an accurate indicator of productivity. Although that is only partially true, JQ is intended to enclose more aspects than just the level of wages, on the understanding that the welfare produced by work cannot be measured solely from a utilitarian standpoint. The somewhat atomistic economic or utilitarian approach is criticised for dismissing the non-instrumental aspects of jobs, which psychologists refer to as 'vitamins' or 'latent functions' of work (Jahoda, 1982; P. B. Warr, 1987).

Also, JQ is conceptually distinct from the level of job satisfaction. Undeniably, poor working conditions can predict lower job satisfaction, and being pleased with work can positively affect workers' health

(Faragher, 2005). However, measures of job satisfaction are inadequate to the purposes of this study, mainly because they incorporate not just JQ but also the effect of subjective expectations and how those adapt to real circumstances.

Another demarcation relevant to this research is that between the concept of quality jobs and the formal/informal nature of work and employment. The latter approach, deeply entrenched in the political discourses of developing countries, associates the legal status of employment – or of the sector in which people work – with good quality jobs. Besides the fact that such association is not always sustained (e.g. Ferreira, 2016), the formality model departs from a JQ framework in that the former focuses on the regulated or non-regulated nature of work and the quality of social welfare systems, whereas JQ emphasises on the capabilities warranted to workers.

Then, what is truly a good job? Is it possible to find a concerted standard on what a good job looks like, irrespective of the personal characteristics of the worker and the environment? Are we interested in jobs being good *for whom*? Good in *what aspects*? Good *relative to what*? Findlay et al. (2013) point out that attempts to measure JQ holistically are relatively recent and that there is an ongoing challenge to find a robust conceptualisation for it. Part of the challenge involves finding a measure that comprehensively grasps the multiple work-related capabilities while remaining simple enough as to use for policy purposes. The effort of finding a suitable measure for comparisons also means taking into account the fact that JQ levels are influenced by several sociodemographic and occupational factors, as well as by macro-level contextual factors. Since there have, for a long time, been attempts from various disciplines to empirically identify the aspects of jobs that affect the well-being of workers and their families (e.g. low pay, insecurity, strain, occupational hazards, etc.), there is a body of knowledge on which to rely. On the one hand, the fact that the subject of JQ has been addressed from so many different disciplines underscores the complexity surrounding the concept of what is intended to capture. On the other, such multidisciplinary but atomistic background stresses the need to agreeing upon a standard holistic indicator of JQ that is comparable across groups of workers and countries.

I argue that the Capability Approach on well-being (from now on 'CA') disseminated by Sen (1999) and Nussbaum (2011b) provides an adequate basis to demarcate a JQ framework while keeping the principles of multidimensionality, international comparability, worker-centrality, objectivity and the inclusion of non-instrumental aspects of jobs. As a starting point, the CA highlights the importance of "the freedom to achieve well-being" and claims that such freedom is to be understood "in terms of people's capabilities, that is, their real opportunities to do and be what they have reason to value" (Robeyns, 2016). The relevance of this premise is that emphatically shifts the focus of attention from the job understood as a commodity, towards the job understood as an end in itself. Notwithstanding, the capability framework has been scarcely implemented in the work realm thus far. It has been only recently that the United Nations Development Programme (UNDP, 2016, p. 1) popularised the idea

that, from the capabilities perspective, a 'good job' must refer to one that enables people "to lead long, healthy and creative lives".

Underpinned by the principles of the CA and directly addressing the challenge of finding a robust conceptualisation of 'good jobs', Green and Mostafa's set of JQ indices comes on the scene as one of the most satisfactory measure proposals hitherto (Eurofound, 2012).[1] Their model consists of a dashboard indicator of JQ that looks at dimensions as varied as earnings, career prospects, autonomy, intensity, social environment, physical environment, and working time. Drawing on the Fifth European Working Condition Survey (2010 EWCS), the authors operationalised these dimensions of work as seven composite indices. These were validated with the same questionnaire in terms of their significant correlations with well-being outcomes such as the number of health problems, health issues caused by work, subjective well-being and subjective work-life balance. The 2010 EWCS covered nearly 44,000 workers and 35 countries, enabling Green and Mostafa to validate their indices in most of the European context, ranging from highly developed economies like Norway to less developed economies like Albania. Moreover, the model resulted so successful that it became the central analytical tool in the analysis of the 2015 EWCS commissioned by Eurofound (2017).

The lack of similar and harmonised data in other regions of the world has prevented the application of Eurofound's model on a global scale, posing the following research question: are these multidimensional indicators of JQ empirically valid and useful enough as to be implemented in developing and developed settings alike? Case in point, there are just no precedents on whether such model would be valid in the Latin American region. It is believed that Eurofound's framework offers enormous potential for policy-making on work and development, provided that the model is equally valid in societies different from where it was originally crafted. Others could argue that exporting Eurofound's model goes against the dominant logic of policymakers who claim that it is impossible – or not recommendable – to use foreign evidence to guide local policies. Precisely, this research aims at verifying that such a model is equally valid in contexts as different as Europe and Central America.

One common objection to implementing a JQ comparative measure across different countries and individuals is that the perceptions of what is most desirable for a job are likely to change over time, cultures and personal circumstances. As Muñoz de Bustillo and colleagues rightfully declare (2011), subjective measures such as job satisfaction do take into account that there are different inclinations and valuations in relation to what is valued and worthless about the job. For example, introverts might prefer – or perhaps need – different jobs to extraverts; some might be more prone to working at night than during the day. Put differently, we may agree that "one man's meat is another man's poison". Indeed,

[1] Throughout the document, I will refer to "Green and Mostafa's indices" and "Eurofound's model" interchangeably.

a large part of personnel and human resource psychology is concerned with finding the best fit between the job and the worker. What is more, the study of the mismatch between jobs and workers' skills set has gained recent attention amid the high youth unemployment rates in industrialised economies.

Presumably, the complementarity between the job and the worker's choice would further contribute to that person's physical and psychological health (Loughlin & Murray, 2013). Although there is some truth in this, this research concerns the quality of the job itself. Moreover, I argue that there is enough common ground to make it possible to generalise a definition of a good job. For instance, it is equally true that the vast majority of workers would favour: a high income over a low one, having the opportunity to advance at work and have minimum security, a comfortable and safe work environment, not to be bullied but to be treated with respect, not to work under too much pressure, a minimum level of autonomy, and the idea of having some leisure time. For the comparative purposes established here, these work features can be considered the minimum generalizable ground for assessing the quality of jobs. Put plainly, and using the converse proverb, "what is good for the goose is good for the gander".

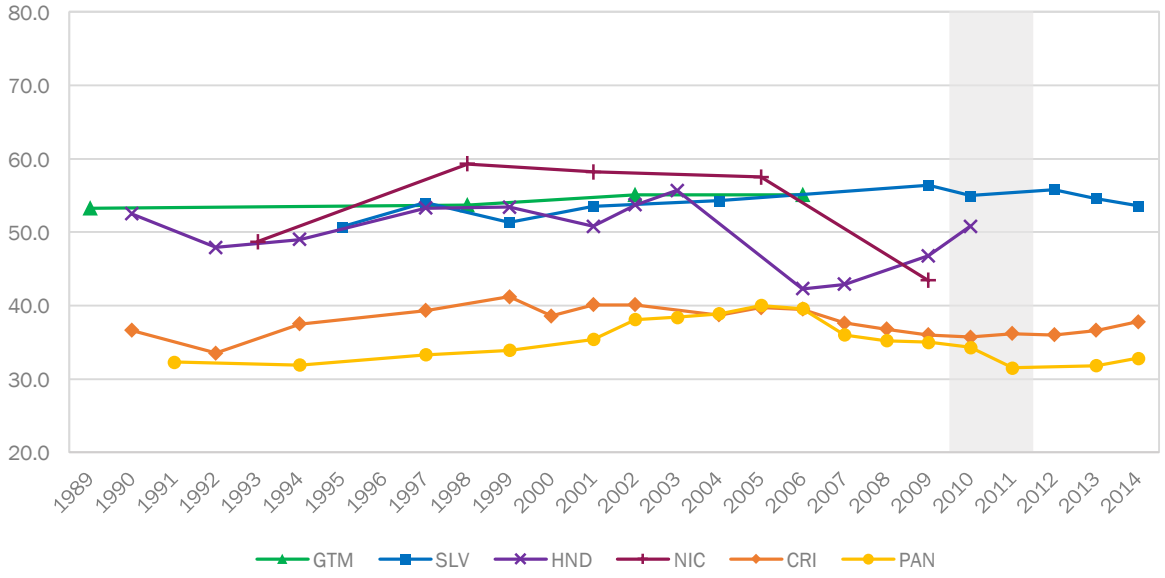
1.2 The setting: informal Central America

The implementation in 2011 of the First Central American Survey on Working Conditions and Health (ECCTS by its acronym in Spanish), marks a milestone in the availability of JQ data in the Latin American region. The ECCTS surveyed more than 12,000 workers in Panama, Costa Rica, Nicaragua, Honduras, El Salvador and Guatemala; all the Spanish-speaking countries of the isthmus. Despite being a one-time survey, the information gathered generated the only internationally comparable dataset on JQ accessible thus far, with a range of variables rich enough as to test the validity of Green and Mostafa's composite indicators.[2]

The Central American isthmus is an appropriate setting to address our research question, first, because of the ready availability of a large dataset on JQ; second, because of the varying characteristics of their labour markets. Despite being a small geographical region, Central America is comprised of countries with a varied range of economic and social development levels and institutional capacity, which makes international comparisons on JQ far more interesting.

[2] Although few independent surveys on working conditions and health have been done in Argentina (República de Argentina, 2009), Chile (Vallebuona, 2011), Colombia (República de Colombia, 2007, 2013), and Uruguay (Martinez & Crego, 2013), the ECCTS is the only exercise of international coverage existing in Latin America thus far.

Figure 1.1. Central America, 1989-2014: urban employment in the informal sector (percentage over total urban employment)



Note: figures correspond to the sum of employers of micro-enterprises, employees of micro-enterprises, domestic service workers, and unskilled independent workers. The grey column indicates the year in which the ECCTS was conducted.
Source: author's elaboration from CEPALSTAT (2018).

Another favourable condition to the purposes of this research is that Central American nations have rates of informal employment that range from 30% to levels as high as 80%,[3] comparable to the rates found in the poorest regions of the world such as Sub-Saharan Africa or India (Chen, Vanek, & Heintz, 2006). As observed in Figure 1.1, when measured in terms of 'sector size' labour informality also represents a significant proportion of urban employment in the isthmus, and persists over time even in relatively advanced economies like Panama. The variability in informality levels across the six cases of study makes of the region a vibrant setting to assess the validity and usefulness of JQ measures against other conventional approaches such as the formal/informal binomial.

In Latin America, the debate about what constitutes a good/bad job is dominated by the formal/informal divide, despite growing evidence on the conceptual and practical shortcomings of such paradigm. On this basis, it will be of interest to confirm what other studies have suggested about the formal sector becoming eminently heterogeneous in terms of JQ. The inadequacy of indicators like the 'size of the informal sector' or the proportion of workers in 'informal employment' becomes more visible through the lenses of the CA: these indicators are inaccurate proxies for JQ because they do not tell much about the valued capabilities and functionings that a job enables per se. Eventually, the confounded associations between informality and bad jobs have led to erratic policy efforts: there are

[3] Percentages of informal employment by country can be found in the online database ILOSTAT, under the tabulation heading 'Informal employment and informal sector as a percent of employment by sex - harmonized series (%)', www.ilo.org/ilostat [accessed 10 April 2018].

those who persecute informality assuming that it is a burden on development and those who promote it as a catalyst of entrepreneurial growth. Overall, these inconsistencies stress the need for an alternative and valid measure of JQ, which contributes to unpack the blurry and unpractical notion of informal work.

1.3 Research objectives: a fourfold path to validation

This study aims to evaluate the validity and efficacy of Green and Mostafa's measure of JQ in the six Central American countries covered by the 2011 ECCTS. I address this objective through the following four questions: (1) Does this indicator of JQ capture the true inequalities between illustrative groups of workers (e.g. between men and women, low-skilled and high-skilled, young and old workers, etc.)? (2) Can we draw meaningful comparisons at the country level in terms of their ability to provide quality jobs? (3) Are the selected features of what constitutes a good job positively associated with Central American worker's well-being outcomes? (4) Is Green and Mostafa's conceptualisation of JQ attuned with what local experts conceive as a 'good job'?

Firstly, aiming to determine whether the JQ indicators behave as expected, it is necessary to describe the average quality of jobs at the individual level comparing by demographic and occupational characteristics of workers (i.e. gender, age, education, occupation, economic sector, etc.). The goal that follows is to assess whether the associations between JQ and individual characteristics correspond with the evidenced from previous studies or common knowledge. In this stage, it will be central to explore JQ differences between formal and informal work arrangements, to decipher what conditions informality entails. This first research objective goes beyond merely giving an overview of the most disadvantaged groups of workers in Central America. In fact, the 2011 ECCTS information would be somewhat outdated to use these results as policy pointers. Instead, the survey data is used to confirm that the resulting JQ averages are plausible. From this point onwards, the notion of 'plausibility' or 'feasibility' is used as a synonym of 'credibility'. Put differently, we would ascertain that our measures of JQ are plausible if the results they yield vary across groups of workers in a manner that is consistent with the extant literature or with 'common sense' in the direction and the size of the effects.

Secondly, to confirm that Eurofound's model fits the purpose of drawing meaningful comparisons between countries, it is necessary to describe and compare JQ averages between the six Central American nations, as well as with European countries whenever possible. Then, considering the literature about the associations between JQ and institutions, the characteristics of Central American labour institutions will be used as a parameter to see if the resulting JQ rankings are feasible. Particular attention will be paid to institutions deemed crucial to protect workers' rights and conditions, i.e., labour regulatory environment, enforcement of international labour standards, workplace inspection systems, and unionisation climate.

The third validation mechanism will be to confirm the existence of a statistical association between those aspects considered constitutive of JQ and the well-being of Central American workers. Indeed, at the core of Green and Mostafa's model is the idea that, when measured from the capability approach, JQ correlates with well-being. The ECCTS collected four variables that will be analysed as well-being outcomes: self-perceived health, mental health (12-GHQ), musculoskeletal illness, and another indicator of physical disease. Also, it will be of interest to explore whether a multidimensional JQ indicator is more strongly associated with workers' health than unidimensional indicators such as the wage level, or than conventional indicators such as the formal/informal nature of the job. This part of the analysis comes with a caveat: due to the cross-sectional nature of the data, it will not be possible to control for health-worker selection effects. Nor it will be possible to perceive the deferred impact that some conditions are expected to have on workers' health (e.g. illnesses caused by long-term exposure to loud noises or radiation).

The last objective of this study is to assess the consistency between Green and Mostafa's conceptualisation and the notion of JQ held in the Central American public discourse. Local accounts about the idea of good jobs were gathered through interviews with representatives from trade unions, governments, employers' organisations, scholars and NGO officials. Rather than a study of work orientations, the results of this qualitative exercise are used as complementary evidence about the generalisability of Eurofound's framework. It is also explored if there are additional features of a good job mentioned by local actors, discussing if these are admissible within our JQ approach. In this sense, it is expected that the interviews will uncover dialogues and provide new insights that may either support or challenge Green and Mostafa's model, but such accounts will not be taken at face value as experts' opinions.

The research uses a mixed-methods approach that will help to interpret the quantitative results in context. The first objective is addressed exclusively through the analysis of the 2011 ECCTS. The second objective is attended using both the ECCTS and the 2010 EWCS dataset for comparison, and part of the interview data that informs about each country's institutional capacity. For the third question, I rely primarily on the Central American survey, contrasting it with the European results when warranted. The fourth objective is answered concretely through the conduction of semi-structured interviews with selected informants.

1.4 Dissertation outline

Following this introductory chapter, the second section of this thesis (*Defining and measuring Job Quality: a conceptual framework*) examines how the academic and institutional literature has defined and measured the concept of JQ in Latin America and the broader international context.

In the third chapter (*An overview of the Central American labour markets and institutions*), I provide an economic, social and institutional snapshot of the Central American isthmus as it was around 2011, the year in which the ECCTS was conducted. The purpose is to provide relevant contextual information that will help to interpret JQ differences and similarities across the six cases.

In Chapter 4 (*Mixed methods of data compilation and analysis*), I present the mixed-methods research design, describing the sources of data, and explaining the construction of the JQ indices and the other variables used in the analysis (informality, well-being and sociodemographic factors).

The subsequent four empirical chapters address the question about the validity and utility of a JQ framework from each of the flanks described in section 1.3. Thus, Chapter 5 (*Which workers have the good jobs?*) addresses the first research objective, by computing Green and Mostafa's JQ indices with the Central American data at the individual level, and discussing whether the obtained patterns match the evidence in the literature.

In Chapter 6 (*Can we measure which countries perform best?*), I concentrate on the second research objective, shifting the level of analysis from individuals to countries. I begin by comparing JQ averages between the six cases. Then I explore how Central American nations would rank among European countries using a harmonised version of the indices constructed with the ECCTS and EWCS datasets. The second part of this chapter is devoted to discussing possible structural and institutional factors that play a role in the observed JQ disparities or similarities between countries.

The seventh chapter (*How significant is it to have a good job for workers' well-being?*), looks at the external validity of Green and Mostafa's model by checking the correlations between the JQ indices and well-being outcomes in the Central American sample. Special attention is given to the behaviour of the Working Time Quality (WTQ) dimension. In addition, I estimate the effects of informality on well-being to discuss whether such an indicator is a more relevant determinant of workers' well-being than the quality of their jobs.

Chapter 8 (*The notion of 'good jobs' in the Central American public discourse*), deals with the final objective of the study, by complementing the previous evidence with a qualitative exploration of the perceptions that local authorities have around the idea of a 'good job'.

In the last chapter (*Appraising a methodology for job quality*), I conclude the thesis by summarising the main research findings and highlighting their contribution to the literature on JQ. I follow with a discussion about the limitations of the study and possible avenues for further research. Critical implications for data collection on JQ in developing countries are listed at the end.

2 Defining and measuring *job quality*: a conceptual framework

This chapter establishes a theoretical framework for the empirical delimitation of a multidimensional scheme of JQ. Firstly, I summarise the contributions and limitations of the main approaches to JQ emerged in the industrialised world. Secondly, I survey institutional efforts to measure JQ from a multidimensional perspective, against which Eurofound's set of indices appears as a sound alternative. Next, I present the fundamental elements of the CA that can shed light on the construction of a holistic JQ model. Lastly, I describe how the notion of 'informality' has dominated the Latin American debate about JQ, despite its shortcomings.

As Grint (2005) states, the term 'work' is socially constructed, therefore, it varies widely across contexts and times. In this study, a 'job' refers to the type of work that is regularly paid or by which a salary is received. Other admissible definitions refer to the realisation of tasks aimed at producing goods and services for others and tasks that demand physical and mental effort (Turner, 2006). The acceptation used in this research also applies to the work of self-employed and own-account workers, as well as other forms of employment that are common in developing countries. Ideally, we would measure the quality of work that is not always entailed to a salary, such as care, domestic, voluntary and creative work. In practice, however, these types of jobs are excluded from the framework because the data used do not cover them. That said, JQ will be broadly understood as a measure of the extent to which the various attributes of a paid job enable workers' and their families' well-being.

2.1 Most traditional approaches to job quality

In defining what a good job is, the literature feeds from multiple disciplines which reflect different notions of work-related well-being. Most of such definitions are unidimensional, but serve as the basis of the more holistic concept of JQ brought forward by Green and Mostafa. What characterises their

model is that bridges up material and non-material job characteristics, while focusing only on job features that have been proved to have an objective impact on workers' welfare.[4]

2.1.1 Economic approaches

Amid technological and material prosperity in Western societies, in past decades, quality of work used to be measured solely through economic indicators like wage levels. Economists at the time stressed on the importance of material rewards as a constitutive and objective aspect of JQ, due to the fact that it is considered central in the opinion of workers (P. Warr & Wall, 1975), and continues to be the easiest feature of work to measure.

However, measuring how good jobs are through the level of wages only, reflects one of the narrowest and most orthodox notions of well-being. Wage level is inadequate to measure JQ because it refers to the utility obtained from work, every time that such utility is known to vary widely depending on the worker's characteristics, or on the social and economic environment in which she resides. The utility-maximising assumption is also evidenced on the priority given to other forms of material compensation like fringe benefits, health insurance and pension contributions (Monteith & Giesbert, 2017). Undoubtedly, access to monetary resources is one fundamental aspect of a quality job, however, this narrow economic approach is contentious because it promotes an instrumental notion of jobs as commodities, and because it assumes that material rewards are the only important benefits obtained from employment.

2.1.2 Psychological approaches

In the 1970s, the emergence of the quality of work life movement gave way to an approach about good job, which shifted the attention from material prosperity to those non-material rewards from work. At this stage, the literature on JQ started to be nourished from work psychology theories as those of Jahoda (1982) and Warr (1987), which stress the idea that paid work contributes to people's well-being through many other dimensions than simply a salary. The former, claimed that employment also provides five 'latent functions' that allowed people to meet their psychological needs and enhance their mental health, namely: 'time structure; enforced activity; social contact; collective purpose; and status or identity'. Following a similar multidimensional viewpoint, Warr proposed a 'vitamin' analogy to illustrate the many aspects of work that, in its optimum level, benefit people's mental health. Specifically, Warr referred to the opportunity of exerting control; using skills; having interpersonal contact; variety;

[4] For more information, Muñoz de Bustillo et al. (2011) provide a thorough revision of the theoretical contribution that each discipline of study has had on the notion of JQ over time. Burchell et al. (2014) give a more critical analysis of such theoretical approaches, of which Monteith and Giesbert (2017) offer a summarised compilation.

external goals and tasks that are demanding to an adequate extent; environmental clarity or predictability; availability of money; physical security; status or identity; and supportive supervision. [5]

In practice, non-material or intrinsic rewards from work were commonly measured through indicators of job satisfaction and workers' own evaluations, experiences and perceptions about their working conditions (P. Warr & Wall, 1975). As other theorists recognise, this approach seems a useful shortcut to evaluate work-related well-being, in that it synthetises the effects of multiple working conditions in a single outcome – satisfaction level – which is easier to collect and interpret (Eurofound, 2012; Muñoz de Bustillo et al., 2011). However, the subjective methodology entails important limitations. The first one, is that job satisfaction indicators refer to individuals in the job rather than to the job *per se* (Burchell et al., 2014). Another limitation, is that job satisfaction is only a measure of the fit between the concrete working conditions and workers' personal expectations from the job; expectations that are generally influenced by cultural norms and values (Muñoz de Bustillo et al., 2011; P. Warr & Wall, 1975).[6] The phenomenon of adaptive preference formation described by Jon Elster (1983) already warned about this source of bias in self-assessment measures of well-being. That said, the reported level of job satisfaction will only give a hint about the emotional utility obtained from work, which can be confounded by multiple, non-controllable factors.

2.1.3 More disciplinary and evidence-based contributions to define job quality

Abundant evidence-based research has been undertaken in the fields of economics, sociology, psychology, epidemiology and occupational medicine, that helped identifying some of the aspects that are constitutive of a good job from the perspective of workers' well-being.

Aspects that have, for a long time, been the focus of attention of academics include: training and skills use, physical safety, and social support from co-workers and supervisors (e.g. Richardson, 2008; Wichert, 2002 on the last subject). It became generally known that deprivation of these features can lead to physical exhaustion, anxiety, and mental stress, all of which can permeate into the worker's familial setting as well.

Discretion or control over things than concern everyday work, such as timing, order of tasks, methods, etc. also have proved to impact on workers' health (Johnson & Hall, 1988; Karasek, 1979; Karasek & Theorell, 1990). More than 20 years after the renown studies of Karasek and Theorell in this field,

[5] See a summarised description of both Jahoda's and Warr's theories on Wood and Burchell (2018).

[6] Moreover, research has demonstrated that preferences for specific job attributes are not stable over time and are likely to vary depending on the social context and basic individual needs faced at a precise point in time. The majority of workers prioritise intrinsic aspects after having met basic needs like higher income and job security (e.g. Gallie, Felstead, & Green, 2012; Kalleberg & Marsden, 2013).

experts keep confirming the relevance of work autonomy in explaining physical and mental health gaps among the population (Marmot, 2017).

There is also plenty of evidence about the correlation between health and the amount of physical, cognitive and emotional effort implicated in the job. Highly intensive jobs that require to work fast and hard, with high workload, too varied tasks, and tight deadlines are known to be detrimental for well-being (e.g. Burchell 2002; Felstead and Green 2017; Fiksenbaum et al. 2010).

The well-being impact of cognitive and affective forms of job security have also been studied in abundance, essentially concerning people's need for employment continuity and progress (Burchell, 2002; Jacobson & Hartley, 1991; Klandermans, Van Vuuren, & Jacobson, 1991; Landsbergis, Grzywacz, & LaMontagne, 2014; Lozza, Libreri, & Bosio, 2013).[7]

Similarly, since the work-life balance approach popularised in the 1970s in the United States, a number of studies have focused on proving the physical and mental health impact of aspects such as the adequate work duration, conducive and regular scheduling, employee-led flexibility to choose shifts or adapt working hours to other commitments, or the provision of childcare facilities (Bambra et al., 2008; Crompton, 2006; Johnson & Lipscomb, 2006; Kalleberg, 2011; Wood, 2016). All these studies basically refer to work-life balance as the ability to harmonically articulate personal life priorities with the demands from work.

Being impossible to survey all the existing research, the paragraphs above give only an impression of the many job features that can impact on the well-being of an 'average' worker. On the one hand, it should be noted that this is not a closed list, and it is expected that other characteristics will prove essential over time as the very nature of work changes. On the other, it is clear what other researchers point out about the pending challenge of synthesizing such a variety of job characteristics into a holistic model of JQ that is suitable to cross-national comparisons (or to determine whether such comparisons are possible at all) (e.g. Findlay et al., 2013; Piasna et al., 2017).

[7] As understood here, is the *perception* of the risk of job loss rather the *loss per se* what can have the most detrimental effects on well-being. Besides, Green and Mostafa (Eurofound, 2012) state that the experience of job insecurity generally foretells a job loss occurrence in the future. In that sense, self-reported data capturing feelings about the risk of job loss is considered the best source of information despite the subjectivity that entails (Burchell, 2002).

2.2 Contemporary institutional attempts to operationalise multidimensional job quality

Following the knowledge basis developed in the academic arena, in the 2000s various international organisations began measuring JQ from a policy-oriented standpoint. As described below, all these institutional proposals operationalise JQ drawing on the multidisciplinary contributions of past research and rescuing the multidimensionality of the concept. In spite of some similarities with other institutional efforts, Eurofound's model (2012) is one of the few frameworks directly grounded in the theoretical tenets of the CA, making it more robust for policymaking and international comparisons than the other approaches.

2.2.1 Most renown international measures of job quality and their shortcomings

The International Labour Organization's Decent Work Agenda launched in 1999 was the first prominent international effort to conceptualise JQ (see the corresponding reports of the Director-General in ILO, 1999, 2001, 2003), and since then successive operationalisation attempts followed (e.g. Anker et al., 2003; Bescond, Chataignier, & Mehran, 2003; Bonnet, Figueiredo, & Standing, 2003; Ghai, 2003). Within this framework, decent work is defined as 'productive' work (i.e. jobs that ensure acceptable livelihoods and sustainable development), performed in conditions of 'freedom' (i.e. not forced), 'equity' (i.e. jobs that do not discriminate and enable work-life balance), 'security' (i.e. that safeguard workers' health, pensions and livelihood), and 'dignity' (i.e. a job where workers are treated with respect, participate in decision-making, and have freedom of association) (Anker et al., 2003; ILO, 1999, p. 3). Despite identifying these dimensions and promote them as a subject of policy, the ILO has not been able to produce a concrete and comparable measure of JQ.

In the same line, the Oxford Poverty and Human Development Initiative (OPHI) introduces the concept 'quality of work' as one of the missing dimensions of the Human Development approach, and proposes a set of internationally comparable survey questions to measure it, although without suggesting any concrete scoring, weighting or aggregation method (Lugo, 2007). The five dimensions identified by OPHI do not differ greatly from other proposals, namely: income, employment protection, occupational safety, working hours, and quantity of employment. Although this scheme remained at the proposal level only, Lugo (2007) rightfully posits that JQ measures should be collected at the individual level and without excluding workers in informal employment.

From the Institute of the Study of Labour (IZA), Clark (2009) draws on cross-sectional data from three waves of the ISSP (1989, 1997 and 2005) to develop a taxonomy on JQ that is then tested in OECD countries. Based on his prior research (e.g. A. Clark, 2005), the author selects the following six dimensions as constituent elements of JQ: pay, hours of work, prospects, interpersonal relationships,

difficulty of the job (i.e. exhaustion and physical risk), and job content (work that is perceived as interesting, useful, socially recognised, and independent). Perhaps, the main problem of this model is the inclusion of subjective evaluations about the job.

Since the 2013 World Development Report, the World Bank has promoted the 'Good Jobs for Development' agenda, siding with the opinion that 'jobs are more than just earnings' (World Bank, 2012, p. 82). However, their approach emphasises on the productivity outcomes of work, placing the creation of more employment as the prior goal. Furthermore, it appears that under the World Bank's rationale, the creation of informal and precarious forms of work is a good starting point, on the condition that productivity is not hampered, and that people work their way up toward better jobs. In the over 400-pages report, they occasionally mention that 'other aspects such as workplace safety, stability, commuting time, learning and advancement opportunities, entitlements to pension benefits, and other amenities are highly valued by some workers'. What is more, the authors of the report explicitly refrain themselves from measuring these alternative job dimensions under the belief that is too hard quantifying their 'monetary value'.

The Centre for American Progress and the Fafo Institute for Applied International Studies, proposed the first version of the Just Jobs Index in 2013 (Kebede, Zhang, & Pedersen, 2013). Their approach is anchored in the ILO's Decent Work concept, with an emphasis on the objective fairness of jobs. The 2013 report used longitudinal data from 183 nations, which were ranked regarding a single composite index. Initially, 'job fairness' was operationalised into two core dimensions (employment and rights at work), and 5 five sub-dimensions (employment opportunities, income security, employment security, safe and healthy work conditions, and equality of treatment and opportunity). In 2014, a second report was launched, which ranked 148 countries across a roughly different index consisting of the simple average of three dimensions: employment, social security, and gender equality (Kebede et al., 2014).

In 2015, the United Nations Economic Commission for Europe released a Handbook on Measuring Quality of Employment (UNECE, 2015), that followed the research initiated in 2010 with ILO and Eurostat (UNECE, 2010). Therein, seven key dimensions of the concept are identified, each comprised of several statistical indicators: safety and ethics, income and benefits from employment, working time and work-life balance, employment security and social protection, social dialogue, skills development and training, and work relationships and motivation. Yet, no aggregation method is delineated in UNECE's scheme.

In its 2014 Employment Outlook, the Organisation for Economic Co-operation and Development (OCDE) presented an operational framework for JQ that covered three grand dimensions, each measured at the individual level: earnings, labour market security, and quality of the working environment (Cazes, Hijzen, & Saint-Martin, 2015; OECD, 2014). In the next Employment Outlook

(OECD, 2015), the framework was adapted to include 17 emerging economies in the comparison. As it can be gathered, this approach includes variables that are not characteristics of the job *per se*, such as the buffering role played by unemployment, or social benefits against job loss (OECD, 2014, p. 86). Yet, the strength of OECD's framework is that, along with Eurofound's proposal, is one of the few methodologies directly anchored in the human development approach.[8]

The Labour Markets Division of the Inter-American Development Bank (IDB, 2017) recently publicised their Better Jobs Index, a multidimensional measure to compare employment conditions across 17 Latin America countries – including the six Central American countries here analysed. The index is simply the average of four indicators equally weighted: formality rate, living wage, labour participation rate, and employment rate. The index is measured in a 0-100 range, and applied on the country level with possible disaggregation by gender and age. However, against all conceptual clarity, the index mixes indicators of 'job quality' with indicators of 'job quantity'.

The frameworks listed above evidence a paradigm shift in the way JQ is conceived in the international arena. Put differently, they express an underlying agreement that no single variable can grasp by itself the multidimensionality inherent to JQ (Dewan & Peek 2007, in Weller & Roethlisberger, 2011).[9] Regardless, all of these institutional efforts present one or other difference (if not limitation) with the model we intend to endorse.

A first realisation is that some of these models remain unconsolidated measures. That is, apart from suggesting a list of indicators (that only could be covered in ideal circumstances of data availability), they do not get to propose a feasible method to compute a measure of JQ. From that point of view, the proposals offered by OPHI, ILO, WB and UNECE render a simple normative declaration of what JQ should consist of, or 'an expression of social or political goals for desirable working conditions', without factoring in measurability and international comparability issues (Burchell et al., 2014; Muñoz de Bustillo et al., 2011, p. 101; Sehnbruch et al., 2015).

I would not be the first to argue either that part of the obstacles to render these proposals measurable, is their flawed conceptualisation of JQ, inasmuch as they mix different levels of analysis with those

[8] Specifically, OECD's model draws on the report of the Stiglitz, Sen and Fitoussi Commission (2009), which underpins the broader Better Life initiative of the OECD.

[9] For an extension of this list of institutional proposals to operationalise JQ, and a detailed analysis of their strengths and weaknesses, I suggest referring to Muñoz de Bustillo et al. (2011) 'Measuring More Than Money', Chapter 4. The authors revise a list of nearly twenty institutional methodologies of international scope. In their 2011 volume, the authors themselves proposed an aggregated European Job Quality Index, comprised of 5 dimensions, each equally weighted: pay, intrinsic quality (skills, autonomy, social support, meaningfulness, self-fulfilment, etc.), employment quality (stability, prospects), health and safety (physical and psychosocial risks) and work-life balance (working time and intensity aspects). Although Green and Mostafa's approach shares many aspects with Muñoz de Bustillo's method (and draws on the same dataset), Eurofound's departs from the latter in crucial decisions, like not including subjective indicators and not synthesising the dimensions in one single measure.

intrinsic features of the job (Sehnbruch et al., 2015). For instance, the methodologies of the ILO, UNECE, IDB and of the Centre for American Progress combine indicators that refer to characteristics of the individual performing in the job (e.g. prevalence of child labour), with contextual indicators that refer to the distribution and access to jobs (e.g. unemployment and labour-force participation rates), and even indicators about the quality of the welfare systems (e.g. social security, informality rates). Differently, researchers say, JQ should be situated as one of the many elements comprising the broader concept of 'employment quality' or 'labour market quality', assuming that "a well-paid, secure job in safe environment and without long or unsocial hours can be assessed positively irrespective of the wider socio-economic structure in which it is performed." (Piasna et al., 2017, p. 180).

Another remarkable difference between agendas like the ILO's or the WB's and Eurofound's conceptualisation is that the formers are not exclusively centred on the worker. Some of them put emphasis on productivity or tax-revenue benefits for countries rather than on the well-being of individuals. The ILO's decent work agenda has been recurrently criticised because it does not make clear whether a 'good job' is good from the standpoint of employees, employers or the state.[10] The lack of worker centrality may explain that some of these frameworks cannot be measured at the individual level.

Some of the institutional approaches described also confuse inherent job aspects with what we could call 'drivers' of JQ (e.g. unionisation), and outcomes of JQ (e.g. job satisfaction). Certainly, extrinsic characteristics like industrial democracy and union density may be related to JQ provided they improve workers' salaries and working conditions, but those factors are not essential to the job itself.

One last difference to point out is that, according to Burchell and colleagues (2014), the majority of the frameworks reviewed have been "launched without empirical foundation". Thus, even if many of the variables included in these models have shown to be related with workers' well-being, the aggregated measures of JQ proposed have not been externally validated. This is a major drawback considering that most initiatives have been designed and crafted in industrialised regions, without properly assessing their potential for other geographical or cultural settings.

[10] A number of scholars have pointed out the risks of the normalising discourse of the ILO posing their decent work agenda as the 'one', every time that there are several vested interests behind such scheme (Di Ruggiero et al., 2015). In the same line, Sehnbruch et al. (2015) posit that the lack of policy impact of the ILO's agenda is in great part due to its all-encompassing operationalisation, that stems from the tripartite nature of the institution, with influences from governments, employers and unions.

2.2.2 Green and Mostafa's Job Quality Indices and their potential for global comparisons

Based on the 2010 EWCS and building on Sen's Capability Approach, Green and Mostafa developed a set of indices to measure JQ across time and countries (Eurofound, 2012). They cover seven dimensions: earnings, prospects, working time quality, quality of the physical environment, quality of the social environment, work intensity, and skills and discretion. In turn, the latter four aspects can be synthetized in an index of intrinsic job quality (IJQ).

Earnings refers to the monetary reward for work, and the extent to which the job meets workers' needs to support a good standard of living, measured as net monthly earnings. *Job Prospects* represents the very capability of having a job, reflected in the quality of contractual status, but also in workers' personal sense of stability, job security and opportunities for career advancement. *Working Time Quality* (WTQ) refers to the extent to which the organisation and control of working time enables workers to balance work and non-work activities (e.g. capacity to not work long or unsocial hours, having decision power over those working hours, and a certain short-term flexibility to attend personal commitments). Then, following the abundant evidence on occupational health and well-being, a *good physical environment* means to work in a safe and comfortable workplace. A *good social environment* indicates the level of supported from colleagues and supervisors, and the absence of any form of physical or psychological abuse. An *(appropriate) work intensity* refers to having enough time to meet deadlines, and few sources of physical, mental or emotional pressure. The use of *skills and discretion* is an indicator that measures task complexity, training, learning and problem solving, on the one hand; autonomy to use one's own judgement over the work process, on the other.

Green and Mostafa observe that other job attributes like discrimination, fairness of wages, qualitative job insecurity[11], fringe benefits that are part of the reward package, or childcare services would have been included in their model should the EWCS had included the adequate variables. Other indicators associated to the macro-level context, like industrial relations, were simply considered inconsistent with their framework because of the reasons aforementioned.

Eurofound's model draws closely from Muñoz de Bustillo's (2011) framework on JQ, but also departs from it in some crucial points. Perhaps the most important difference is that the former focuses exclusively on objective job characteristics, and excludes measures of meaningfulness or self-fulfilment because are considered too subjective to fit their framework and do international comparisons. Another important difference is that, to avoid making arbitrary assumptions on the value that each main index

[11] Different to quantitative job insecurity (experiencing risks of job loss), this term refers to the perceived erosion of valued job features (Burchell, 2002; De Witte et al., 2010).

has for the average worker, Eurofound's method does not involve any complex aggregation of the indices into one single measure, as done in Muñoz de Bustillo et al. (2011) and in the IDB's model. This is considered a strength insofar the interpretation of one excessively averaged figure can result more complex than analysing the specific components of JQ separately, especially if these are unrelated.[12]

What is more, the statistical computation used by Green and Mostafa is generally intuitive and simple to understand or replicate, without compromising rigour. Specifically, all the indices are computed in a continuous scale from 0 to 100, except for the earnings dimension, which is measured in monetary units. Different to other methods, like the one followed in Alkire and Foster (2011), no arbitrary thresholds are set for each index, which further facilitates international comparability. And yet, neither the lack of aggregation nor the absence of thresholds preclude researchers to implement them in further steps if considered useful for visualising their results or for monitoring JQ over time.

Another strength of the indices replicated in this study is that they are empirically validated. The list of indicators selected to construct each of the seven scales was done prioritising those for which there is reasonable evidence about their effects on workers' welfare. The composite indices were also validated based on the significant correlations with workers' well-being (measured as the number of health problems, health issues caused by work, subjective well-being, subjective work-life balance, and meaningfulness of work), an exercise that few datasets allow us doing.

A useful innovation of Eurofound's scheme is that the JQ scales can be calculated at both the individual and the country level, and here lies one of its greatest potential for policy purposes. On the one hand, this characteristic enables us to compare JQ levels between population subgroups in terms of, for instance, gender, age, occupation, and even between workers in formal and informal arrangements, to identify the most disadvantaged workers. On the other, the model also has proved useful to compare countries as different as Norway and Turkey. And yet, there has been scarce empirical evidence on whether such measures are useful and valid in contexts beyond Europe. Precisely, this study aims at narrowing this knowledge gap by testing the potential of Eurofound's model in Central American countries.

[12] There will always be advantages and inconveniences in constructing composite indices, therefore a balance is preferable between complete aggregation and detailed decomposition. On the one hand, composite measures are especially adequate to summarise complex or multi-dimensional phenomena that need decision making; they help to assess and visualise countries' performance in the form of rankings, establishing benchmarks and encouraging policy action; they are easier to interpret across time and to communicate to non-academic audiences; and they stimulate the collection of better data. On the other, composite indicators can lead to wrong policy decisions if constructed without enough robustness. Similarly, if sub-indicators are ignored in the final interpretation, the summary index can lead to simplistic or misled conclusions (OECD, 2008).

2.3 The capability approach on job quality

The Capability Approach (CA) originates in the work of Sen (1999) and it is intensively developed by Nussbaum (2000, 2011a, 2011b). Thus far, this conceptual framework has been adopted for the study and improvement of various domains of human development, including health, education, gender inequalities, environment, political participation and even trade (Ibrahim & Tiwari, 2014). Differently, its application in the field of work and employment is more restricted. In what follows, I introduce some fundamental tenets of the CA with the purpose of re-establishing the adequacy of the framework within which Eurofound constructed its JQ indices.

2.3.1 Key assumptions of the capability approach and their implications for defining and measuring Job Quality

The first defining element of the CA, useful to understand the JQ concept here sustained, is the distinction between capabilities and functionings. As mentioned in the introductory chapter, Sen (1999) understands well-being and development as the freedom for doing things or the 'opportunity to' accomplish things that we have reason to value. Such freedom to choose is broadly termed 'capability', while the actual realisation of that election or achievement is termed 'functioning'. In other words, capabilities are potential functionings (Nussbaum, 2011a). Underlying, is the assumption that two persons with different sets of capabilities may have, potentially, the same functioning achievement. In the field of work and employment, this principle implies that, rather than looking directly at the utility or satisfaction produced by a job, a measure of JQ must focus on the extent to which the job allows us to generate valuable outcomes and expand our capabilities.

Similarly, Sen differentiates 'substantive' from 'instrumental' freedoms. While the former includes the elementary capabilities or constitutive human needs (e.g. being nourished, literate, having freedom of speech, etc.), the latter refers to those capabilities conducive to substantive freedoms. In terms of JQ, this suggests that a job can be considered both a means and an end. Indeed, Sen often mentions the relevance of work and employment not only as instruments to ensure survival, but also as substantive freedom. Unemployment, he says, is not merely "a deficiency of income that can be made up through transfers by the state", on the contrary, employment itself is a potential source of initiative, skills, self-confidence and health (Sen, 1999, p. 21). Likewise, income from work should not be valued *per se*, but as means to achieve other ends or expand other capabilities (Robeyns, 2005; Sen, 1999). This supports the idea that a JQ framework ought to include other indicators rather than the wage level, as implied in Jahoda's and Warr's theories of multidimensional effects of employment. Using Sen's terminology, Sehnbruch (2008, p. 567) too distinguishes key functionings generated by work – such as self-respect, personal growth, and social integration –, from other basal functionings, such as being healthy and having a stable source of income.

In this line, protective institutions such as unemployment benefits, statutory income or emergency public employment should be assigned an instrumental role only, according to Sen. On the one hand, this idea is crucial to understand the importance of local labour institutions in explaining possible variations in JQ across countries. On the other, it helps clarifying that there are different levels of analysis involved in the broader concept of 'employment quality', which not only embraces intrinsic aspects of the job itself, but also contextual features of the labour market and labour institutions.

The CA assumes that although the commodities required for creating capabilities may vary across people, countries and societies, there are certain capabilities that remain the same for everyone (for instance, the capability to be nourished is universal, regardless that the calories needed may vary from person to person, depending on her health status or the kind of job performed). This characteristic certainly makes the CA more suitable for comparative analyses, as pretended with JQ measures. The framework is also sensitive of the differences across groups of people, societies, environments, and of how these variations can affect the likelihood of converting capabilities into functionings. Sen (1999, p. 70) identifies five types of 'conversion factors' that intervene in this transformation: personal heterogeneities, environmental diversities, variations in social climate, differences in relational perspectives across societies, and distribution of that commodity within the family.[13] The influence of these variables is vaguely taken into account in economic models of well-being, reason why many economists still use GNP as a direct measure of a country's development (Alkire, 2005).

Taken to the sphere of JQ, the notion of conversion factors sheds light on the different effects that the same job feature can have on the well-being of workers from different societies and contexts. For instance, personal heterogeneities like age or education level can affect how much well-being is obtained from a good job. Likewise, social climate factors like labour policies or unionisation culture can also constrain workers' freedom of agency to transform job capabilities into well-being. Ibrahim and Tiwari (2014, p. 4) claim that the 'acknowledgment of the heterogeneity of factors that are involved in the valuation of this well-being' has been a crucial addition of the CA in development studies. Given the particular role that states and institutions have in creating and protecting people's most basic capabilities (Robeyns, 2005), this study pays attention to the possible associations of international JQ differences, with the type and capacity of labour institutions.

Yet, it is worth reminding that the CA is a 'human-centred' approach to development. Sen and Nussbaum conceptualise human development as substantive freedom, therefore placing the focus on individuals' well-being, and considering market welfare only as a means to such an end. The key

[13] Robeyns (2016) uses a simpler categorisation of only three conversion factors: (1) personal factors (e.g. physical condition, sex, intelligence); (2) social factors (e.g. public policies, social norms, practices that unfairly discriminate, societal hierarchies, power relations related to class, gender or race); and (3) environmental factors (e.g. climate, pollution, proneness to earthquakes, presence/absence of water sources, roads, means of transportation and communication, etc.).

contribution of the CA is to reemphasise the primacy of people as the focus of development, and shifting the attention from 'utilitarian and commodity-centred views of human well-being' to human freedoms and capabilities (Ibrahim & Tiwari, 2014, p. 3). The relevance achieved by the works of Sen and Nussbaum denotes a return to humanitarian doctrines and to the idea of "universal empathy" against cultural essentialism, that is, that "there are some needs and capabilities that apply to us all" only for being part of the same human species (Chernilo, 2017, p. 33; Nussbaum, 2000).

With this being said, the CA is cautionary in taking subjective preferences as indicators of what is 'really worth pursuing' or what people 'have reason to' value. Building on Elster's theory of adaptive preference formation (1983), Sen and Nussbaum argue that utilitarian measures and self-assessments of wellbeing are likely to be distorted because they do not account for the tendency of individuals to adjust preferences under circumstances of deprivation, therefore any self-assessment of well-being is likely to be distorted. Certainly, stated preferences can be useful as contextual information to interpret the objective and observed levels of a certain capability (Watts, Comim, & Ridley, 2008). In any case, the assumption that subjective valuations are inaccurate proxies for well-being also shed lights on what should be considered constitutive of JQ, and under what criteria the different indicators of JQ should be selected. One clear implication is to reject scales of job satisfaction as indicators of how good jobs are. It may also explain Green and Mostafa's decision to exclude items of work meaningfulness and self-fulfilment from their indices. Nussbaum, however, gives more credit to individuals' bottom-up deliberative capacity to evaluate what is preferable for themselves, arguing that for an external observer is generally easy to distinguish between genuine and constrained preferences in extreme cases of deprivation.[14]

At some point Sen (1999) mentions that the capabilities that enable survival and avoid poverty, should be deemed the most basic ones, but he keeps this list rather unfinished, as an open-theory of social justice.[15] Unlike Sen, Nussbaum (2011b) proposes a circumscribed list of central human capabilities. Her list builds upon the principle of human dignity and should be understood as an attempt to identify those 'permanent human interests', that is, achievements that people do not want to revert once experienced. Specifically, she identifies ten broad interests (Nussbaum, 2011b, pp. 33–34): (1) life; (2) bodily health; (3) bodily integrity; (4) emotions; (5) the ability "to use imagination and thought in connection with experiencing and producing works and events of one's own choice"; (6) exerting practical reason and the ability to continue to be educated during work life; (7) affiliation and "meaningful relationships of mutual recognition with other workers"; (8) the ability to play and have

[14] Both Sen and Nussbaum include the concept of 'agency' as another distinctive element of their approach. To Sen (1999, p. 190), it is necessary to acknowledge individuals as responsible agents of change and 'dynamic promoters of social transformations' rather than beneficiaries. Similarly, for Nussbaum, recognising agency is also about not infantilising humans as passive recipients of well-being.

[15] As Ibrahim and Tiwari explain (2014, p. 4), "Sen (1993) refuses to impose a specific set of valuable capabilities as he stresses the roles of public reasoning and deliberative processes in identifying these capabilities in each socio-cultural context."

leisure time that is protected by law; (9) the ability to control one's environment; and (10) relation to other species. The author also talks about 'self-respect and non-humiliation' or 'being able to be treated as a dignified being whose worth is equal to that of others'. The fit between such list and the job features included in Green and Mostafa's model is compelling. Regardless, this 'open list' situation also involves a challenge for evaluative purposes in the field of JQ, since the aspects of work that could contribute to expand different capabilities are not roundly defined either.

All the more interesting is Nussbaum's idea that the various central capabilities should not be traded off because of the intrinsic value all of them entail (2011b, p. 35): "The irreducible heterogeneity of the Central Capabilities is extremely important. A nation cannot satisfy the need for one capability by giving people a large amount of another, or even by giving them some money. All are distinctive, and all need to be secured and protected in distinctive ways". Sen shares the characteristic of irreducibility and plurality of elements that constitute people's quality of life and that cannot be synthesised in one single metric without a minimum distortion. Precisely, the Human Development Index (HDI) adopted by the United Nations Development Programme (UNDP) aims at rendering the CA applicable to policy-making, while reflecting the multidimensionality of human well-being, and has done it with notable impact (Sehnbruch et al., 2015). This reinforces Green and Mostafa's decision to keep the JQ indices as a dashboard indicator, precisely because aggregating them would involve tough concessions.[16]

Having considered some of the key implications of the CA for the conceptualisation and measure of JQ, the challenge of overcoming the gap between theory and practice has also become evident. Even if scarce, we build on the few studies that have applied the CA to the field of work and employment.[17]

The work of Sehnbruch can be considered of particular importance for the Central American context, because of its application of the capabilities approach in the Latin American region. Building on Sen's work, Sehnbruch (2008) adopts the term 'quality of employment' to embrace the idea that just having a job – traditionally understood as a commodity – is not correlated to the valued 'functionings' generated by that job. The author is one of the first in the region to emphasise on the fact that unemployment rates are inaccurate indicators of the lack of decent jobs; an idea that today has become much more accepted among heterodox economists (e.g. Ha-Joon Chang in Young, 2014). Moreover, Sehnbruch posits that employment quality should be measured not *instead of*, but *in addition to* conventional measures of employment rates and wage levels. She even proposes an aggregated index to estimate the quality of

[16] It could be argued that the irreducibility of the various job aspects suggested by the CA goes directly against the normative implications of a theory of 'compensating differentials'. Such theory posits that in a context of perfect markets, the level of workers' monetary reward would directly reflect the level of unpleasantness or disutility of their job, as Adam Smith used to believe. Thus, jobs that involve more uncomfortable schedules, worse physical environments or require harder tasks would be always compensated with higher wages. However, in real labour markets where there is no full employment, and where competition and information are not perfect, the most unpleasant jobs are not usually the ones that get the best payment.

[17] Some of these contributions include the works of Miles (2014), Monteith and Giesbert (2017), Abma et al. (2016), and van der Klink et al. (2016).

employment, which includes indicators of income, social security coverage, contractual status, employment stability and professional training received. Although it only consisted of a single exercise tested in Chile, it helped to advance on the importance of collecting objective indicators of JQ at the individual level.[18] Sehnbruch developed this methodology in early studies and continued to promote it in following publications (Sehnbruch, 2003, 2004, 2006), highlighting the productivity and redistribution benefits that employment quality can have on the Chilean context.

More recent examinations on how to implement the CA in the study of JQ in Latin American countries appear in the unpublished works of Sehnbruch, González, Mendez and Arriagada (2017a, 2017b). Building on multidimensional poverty studies, these researchers use the method of Alkire and Foster (2011) to construct a multidimensional indicator of the quality of employment, capturing three dimensions: quality of income, job security and working conditions. They researchers test their indicators in six South American countries using multi-purpose Household Surveys, and then in six Central American countries using the 2011 ECCTS. Making an analogy to poverty measures and using different cut-off points, the resulting indices are expressed in terms of deprivation from good employment, which is different to the positive orientation entailed in the concept of job 'quality' proposed by Eurofound (2012). The methodology of Sehnbruch and colleagues is distinct from Green and Mostafa's in other aspects as well, most importantly, in that their measures have not been validated in terms of the significant effects on workers' well-being.

Regardless, these isolated local studies have helped to stress some of the assumptions of the CA and its implications for the measure of JQ, namely: the distinction between means and ends or between capabilities and functionings; the notion of work as substantive freedom; the centrality of the worker as priority subject of development; the role of agency; the relevance of objectivity of the selected indicators; and the multidimensionality of every life domain that ought to be reflected in a JQ measure. They must be praised as the few inputs to the study of JQ and capabilities in Latin America, especially considering that in this region the debate about good and bad jobs has been dominated by the formal/informal divide.

[18] Muñoz de Bustillo et al. (2011:138-46) provide a good summary of the aggregation process used by Sehnbruch and a more detailed assessment of the strengths and weaknesses of the Quality of Employment Index as compared to other methodologies.

2.4 Predominance of the informality approach in Latin America

The first definition of 'informal sector' appeared in the pioneering ILO's Report on Kenya (ILO, 1972) and in the work of Keith Hart (1973), but it gained prominence in the Latin American public discourse particularly after the permeation of the neoliberal policies derived from the Washington Consensus, and has not retracted ever since. Some scholars recognise at least five different schools of thought about the causes of labour informalization, although here I only refer to those theories that have gained strength in the region. The succinct description of these theories attempts to account for how the notion of informality has proven to be, not only erratic in explaining transformations in the quality of jobs, but also unstable in its practical measurement.

First, the *dualist* or *productive* perspective framed in the studies of Tokman (e.g. 1978, 2001, 2007) and ILO-PREALC, described the 'informal sector' as comprised of own-account workers, as well as small businesses of low productivity and low wages; a sector of unregulated economic activities that did not contribute to tax revenue. Under this perspective, informality was understood as the result of the temporary inability of the industrial sector to absorb unemployment, that is, a sector that worked as a safety net in stages of economic transition. As such, the informal sector was seen isolated from its opposite formal sector, a structural heterogeneity that was characteristic of Latin American labour markets. However, the modernisation thesis that the informal sector shrinks as economies grow, has been refuted from different angles (e.g. Avirgan, Bivens, & Gammage, 2005). In general, this has been considered too narrow an approach, focused only on aspects of fiscal retribution, productivity, and economies of scale.

This view evolved into a more Marxist – and similarly structuralist – approach, in which the 'informal sector' was conceived as connected to the formal sector, though subordinated to it in a rather perpetual way. As such, the informal sector was believed to be functional to the capitalist system, because it allowed to reduce production costs through mechanisms like subcontracting or temporary hiring of self-employed workers (Moser, 1978; Portes, Castells, & Benton, 1989).

Encouraged by the neoliberal ideology, there emerged yet another approach to informality: the so-called *legalist* perspective, with Hernando De Soto (1989) as its main promoter. This school of thought maintains that informality is a consequence of the rigidity of labour markets, and excessive state regulation that makes formalisation of businesses more costly and cumbersome. Stemming from this approach is the idea that workers rationally and voluntarily choose to dissolve conventional employment relationships and quit their social protection rights, in exchange for greater autonomy and flexibility – a choice that would be encouraged by the availability of free public services (Bosch & Maloney, 2006; Henley, Arabsheibani, & Carneiro, 2006; Levy, 2008; Perry et al., 2007). Without a doubt, the

voluntarist doctrine has contributed to the proliferation of more neoliberal interpretations of informality as a kind of entrepreneurial mind-set whose consequences are wholly left to individual fate. Yet, it is argued that the modern rhetoric of 'entrepreneurial spirit', 'voluntary risk taking', 'entrepreneurialism oriented towards dynamic growth' or as a promising avenue towards 'economic efficiency' are all interpretations that depart considerably from the reality of many self-employed workers in Central America.

The unstable conceptualisation of informality has also resulted in changing operational definitions. In 1993, when the term 'informal sector' was being officially adopted as a development measure (Bangasser, 2000), the 15th International Conference of Labour Statisticians (ICLS) recommended to define it only based on the type of the productive unit, that is, as those firms that are not registered or that operate as household enterprises. This led to using variables like establishment size as mere proxies of formality, e.g. the size of the informal sector would correspond to the prevalence of urban establishments of 5 or less workers. Moreover, agricultural activities would be excluded from such categorisation because of their own specificities of subsistence, which make them difficult to differentiate from informality (ILO, 2013). In practice, this has led to a substantial part of the population being left out of the discussion on JQ.

Then, in 2003 the 17th ICLS recommended to amend the previous definition based on the type of employment relationship, irrespective of the formal/informal nature of the production unit (Hussmanns, 2005). The decision was made over the understanding that informal employment relationships were more embedded in the formal sector than originally thought. Even today, it is very likely to find people without contract, subcontracted or not contributing to social protection, but working within registered companies. We agree with Chen et al. (2006) in that something positive of the operational change and extended definition proposed at the 17th ICLS is that it brought the notion of 'informal employment' slightly closer to that of job insecurity from workers' perspective, that is, looking beyond the productive and fiscal effect of informality.

In the contemporary academic literature, several operationalization criteria are found, many of which do not follow the recommendations of statisticians, either because they lack the needed data or because they accommodate the definitions to partisan interests. Common indicators of informality used by researchers and policymakers include: unskilled self-employed workers; urban employees in small companies, or owners of companies with less than 5 employees; businesses without bookkeeping; workers who lack contributions from the employer to the social security system; employees not entitled to a pension for work; workers without contract; domestic work; unpaid family workers; workers without income; or workers with income generating activities not registered in national statistics – for whom Feige (1989) used the term 'underground economy'. As the sociologist J.P. Perez Sainz rightfully pointed out during an interview, this endless list of indicators evidences that:

> "the concept of informality today suffers of polysemy; if you sat twenty experts around the table and asked them what informality is, you would likely get twenty different definitions".[19]

Certainly, defining and measuring labour informality has been a 'perennial challenge' (Williams & Lansky, 2013, p. 355), and has not become any simpler with the range of definitions and operationalisations available. Opposing accounts about the triggers of informality are plentiful in the literature, some of which have even derived in catchy but simplistic dichotomies such as 'choices or constraints,' 'exit or exclusion,' 'survival or growth-oriented self-employment,' etc. (e.g. Berner, Gomez, & Knorringa, 2012; González De La Rocha & Escobar Latapí, 2008; Perry et al., 2007).

Many theorists have tried to overcome the narrow formal-informal framework, recognising the heterogeneity of working conditions or job quality levels that can be associated with informality (Amuedo-Dorantes, 2004; Chen et al., 2006; Ferreira, 2016; Fields, 2005; Günther & Launov, 2006; Jütting, Parlevliet, & Xenogiani, 2008; Kucera & Roncolato, 2008; Perez Sainz, 1998; Phillips, 2011; Williams et al., 2011). However, to grasp the full spectrum of conditions, policymakers have been provided with inextricable operationalisations that are hardly comparable across countries and, yet, fail to include those job aspects that are constitutive of JQ. Certainly, the lack of adequate instruments for data collection on JQ has not helped in this regard.

Interestingly, the concept of 'informal sector' as an analytical category was already being hardly criticised by Breman (1976) soon after it was publicised, and despite four decades of theoretical debate the informality approach continues to be of little use for developmental planning. Its shortcomings do not only reside on the difficulty to collect the necessary data but also in that it is still not clear whether informality is good or bad, depending on whose welfare we prioritise. In that sense, it is argued that 'informality' is used as a proxy for very different variables which have little to do with intrinsic job features. An essential weakness is that the approach is not always work-centred, which partly explains the lack of empirical evidence about the impact of informality on workers' physical and mental health. Yet, despite its shortcomings the concept continues to be widely used in the public discourse; not even the ILO succeeded in imposing their 'decent work' approach over the informality concept, and has now gone back to focus on the 'formalisation of informality' as their main agenda for the developing world (see OIT, 2014).

[19] Interview conducted during fieldwork research, on October 2016, in FLACSO-Costa Rica.

3 Central American labour markets and institutions: an overview

Of small population and territorial extension, Central America is commonly pictured as a highly vulnerable region. To different intensities, the countries of the isthmus have faced marked difficulties in their development process, reverberating on their institutions and labour markets. This chapter provides a comparative contextual snapshot of these six countries *circa* 2011 to help in the interpretation of the JQ results gathered by the ECCTS in the same year. Based on the revision of local academic literature alongside official statistics at the country level, the chapter navigates from the countries' political history to key characteristics of their labour markets and labour institutions.

3.1 A glimpse into the isthmus' political and socioeconomic context

The stark differences among Central American countries, together with the heterogeneity of their labour markets and institutional capacity, are said to have historically hindered the materialisation of a regional integration project (Beteta & Moreno-Brid, 2014; Pérez, 2013; Pérez, Soto de la Rosa, & Pallandra, 2013; Rodríguez Chavez, 2015).[20] Rather in opposite direction, the region has been wrecked

[20] The Central American integration project started in 1951 with the creation of the Organization of Central American States (ODECA by its acronym in Spanish). Precisely, ODECA was aimed at reducing the region's development gaps and overcoming the disadvantages related to the small size of their national economies. Arguably, the most significant achievements of such process hitherto have been the creation of the Central American Common Market in 1960 (MCCA by its acronym in Spanish) and the more recent conformation in 1991 of the Central American Integration System (SICA in Spanish). The MCCA prompted the modernisation of the productive structure of the countries, while the SICA aimed at broadening the goal of regional development to the political, economic, social, environmental, cultural and educational fields.

by a relatively recent sequel of civil wars, dictatorships, and further political conflicts that frustrated the region's integration plans and, to different degrees, the countries' institutional capacity.

Political instability first hit with more strength in Guatemala and Nicaragua, spanning from the 1960s to the 1980s, period in which autocratic right-wing governments and leftist insurgent groups battled for power. Political struggles were exacerbated by the economic debt crisis. Additionally, the conflict escalated due to the role of the US in backing right-wing groups economically and militarily (Pérez-Brignoli, 1989), resulting in thousands of deaths and internally displaced persons. The social consequences of the political turmoil continue to be felt in the entire region. Moreover, the emergence of gangs – *maras* – and the rocketing criminality figures that have haunted the region ever since, are deeply rooted in the socio-political disruption of the past decades.

By the time the outbreak of war was threatening the security of the entire region, the peace agreements began to take place and, from the early 1990s, Central America began its transition to political stability and reconciliation. Currently all dictatorships have been replaced by democratically elected civilian governments of different factions. *Circa* 2011, El Salvador and Nicaragua were being ruled by the leftist parties *Frente Farabundo Martí de Liberación Nacional* (Farabundo Martí National Liberation Front, FMLN) and *Frente Sandinista Liberación Nacional* (Sandinista National Liberation Front, FSLN) respectively. Both parties were leaders of the political revolutions of the 80's in their countries, and today are associated to social-democracy. Guatemala's and Costa Rica's governments *circa* 2011 were also placed more to the left side of the political spectrum and identified with a social-democratic ideology; the difference being that Guatemala has had a series of government disruptions since 2012. Honduras, instead, has been ruled by a right-wing, conservative, and nationalist party since Zelaya's overthrown in 2009: the so-called *Partido Nacional* (National Party of Honduras, PNH). By 2011, Panama was also being ruled by a right-wing government associated to nationalist, conservative, populist ideologies, and strong supporter of the free market.[21]

What once was a single democratic republic[22], is now a region comprised of six nations with different socioeconomic, cultural and political idiosyncrasies;[23] differences that may or may not reflect on the average quality of the jobs they provide.

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[21] See Mahoney (2001) for a thorough comparative study about the formation of different political regimes in Central American countries.

[22] The Federal Republic of Central America existed from 1821 to 1841. It consisted of all countries except Panama, which by then was still part of Colombia.

[23] The diversity within the isthmus is even noticed in the countries' cultural systems. For instance, statistics from Latinobarómetro (2014) indicate that at the beginning of the 2010s, Roman Catholicism was the major religion in all countries, with a representation that ranged from 47% and 49% of the population in Guatemala and Honduras respectively, to 72% in Panama; while Protestantism was the second largest religious group, with proportions significantly higher in the Northern Triangle (31% in El Salvador, 41% in Honduras and 42% in Guatemala).

Table 3.1. Central America circa 2011: GDP, poverty, inequality and HDI

	Annual GDP per capita (current US$)	Population below the poverty line (%) [a]	Gini index [b]	HDI rank (out of 187 countries)
Guatemala	3,159	67.7	52.4 (high)	131 (medium)
El Salvador	3,734	46.6	42.4 (medium)	105 (medium)
Honduras	2,326	67.4	57.4 (high)	121 (medium)
Nicaragua	1,679	58.3	47.1 (high)	129 (medium)
Costa Rica	9,173	18.8	48.6 (high)	69 (high)
Panama	9,336	25.3	51.8 (high)	58 (high)

(a) Corresponds to the population whose average per capita income is below the poverty line, that is, "the minimum income needed to meet a person's basic needs", which usually reflects the cost of a basket of basic goods and services.
(b) The Gini index ranges from 0 (perfect equality) to 100 (absolute inequality). Countries are conventionally classified into four categories of inequality: low (29 and lower), medium (30 to 44), high (45 to 59) and very high (60 to 100).
Source: author's elaboration from World Bank (2018), CEPALSTAT (2018) and UNDP (2011).

The rebuilding of institutions and labour markets since the reestablishment of democracy has been slow and heterogeneous. In some countries, political, economic and social instability persists,[24] adding more complexity to the ambitious project of regional integration but also hindering Central America's integration to the global economy.

For instance, although since 2010 Nicaragua's economy has been growing as rapid as that of Panama and Costa Rica (above 3% according to data from the World Bank, 2018), by 2011 it still ranked among the smallest economies of the entire Latin American continent along with Honduras, and only just better than Haiti; while Costa Rica and Panama presented the highest GDP per capita of the isthmus (Table 3.1). Economic poverty rates by 2011 varied by country as much as their GDP: the proportion of people living below the national poverty line ranged from nearly 19% in Costa Rica to 68% in Guatemala. Persistent poverty is said to be the major problem faced by this sub-region because it affects other social indicators like education and health, thus reflecting on the countries dissimilar rankings within the Human Development Index (HDI). In addition, the lack of redistributive fiscal policies is deemed the main cause of the sharp economic inequality that is characteristic of many Latin American countries. Back in 2011 the GINI index was around 50 in most Central American nations, which is considered a high level of inequality in the distribution of wealth.

Local developmental literature often characterises the Costa Rican case as a success within the isthmus. Its main accomplishments are having the highest per capita income; being the least unequal country; presenting a lower incidence of poverty; having met basic needs like potable water, sanitation facilities electricity and public schools; and taking leadership in expanding social expenditure in education and health (Colburn & Cruz, 2007; Sánchez-Ancochea, 2009). Costa Rica perhaps benefited from political stability more than its neighbours, establishing a higher support for democracy and stronger institutions.

[24] Without going any further, on November 2017 a new political turmoil erupted in Honduras following an unresolved and disputed presidential election, taking thousands of protesters into the streets.

Relatedly, in a comprehensive analysis of welfare regimes in Latin America, Martínez-Franzoni (2008) clustered Costa Rica and Panama within the countries with best performance. On the contrary, Nicaragua and Honduras were located within the least successful group, characterised by: lower formalisation rates; lower per capita GNP; lower urbanisation; with 'a higher reliance on self-employment and transnational labour markets'; and a lower rate of employment in the public sector.

3.2 Labour market features

3.2.1 Workforce participation and characteristics

In their race to economic integration, all six countries have competed with varying quantity and quality of resources, which can also reflect on their performance to provide good jobs. For instance, Nicaragua is the largest national territory in the isthmus and the richest in natural resources and workable land (Colburn & Cruz, 2007). El Salvador is the smallest territory, and the only one without a coastline to the Atlantic Ocean. However, *circa* 2011 Guatemala was by far the country with the largest total and economically active population (EAP) – practically 4 times Panama's – and continues to be the population growing most rapidly (Table 3.2). Some authors argue that the small size of the Panamanian and Costa Rican workforce is what prevented the establishment of labour-intensive industries – like the cultivation of large coffee plantations – favouring instead the establishment of processing and export industries that are better at profit making (Goss & Pacheco, 2011, p. 169).

By 2011, the Central American workforce had net participation rates[25] somewhat homogeneous across countries – between 61% and 67% according to ECLAC – and it was predominantly male, young, low educated and urban (see Table 3.2).

Regardless, a few variations across countries are worth noting. For instance, women's participation in Honduras was the lowest of all (41.7%). The participation rate of less experienced workers – under 25 years – was significantly higher in Guatemala, Honduras and Nicaragua, which in turn is indicative of a lower retention of prospective workers in the educational system (PEN, 2008).[26] Countries heterogeneity in skills levels is more marked: while the proportion of workers who had reached some level of post-secondary education in Panama and Costa Rica was around 27% and 22% respectively, in Guatemala and Honduras it was only 6% and 8%.

[25] Percentage of active population over the working-age population.

[26] The fact that countries like Guatemala and Honduras are still in the most delayed stage of demographic transition, as opposed to Panama and Costa Rica (Flores, 2014), also impacts on the younger composition of their labour force. In this sense, it can be expected that in countries with a large youth bulge, states prioritise creating more sources of employment to integrate that growing economic population. On the contrary, in countries at more advanced demographic stages and with a shrinking labour force, policy priorities may be more oriented to improve the quality of the jobs already available.

Table 3.2. Central America circa 2011: characteristics of countries and their Economically Active Populations (EAP)

	Territory (km2)	Total population 2011 (in thousands)	Growth rate of the EAP (%)	Women's participation rate (%)	Young workers (15-25 years) participation rate (%)	Proportion of EAP with 13+ years of schooling (%)	Rural population (%)	Indigenous population (%) [a]
Guatemala	108.9	14.688	3.5	48.4	53.6	5.9	48.0	41.0
El Salvador	21.0	6.252	1.9	47.2	46.0	12.6	34.8	0.2
Honduras	112.5	7.769	3.2	41.7	51.4	7.8	49.2	7.2
Nicaragua	129.5	5.894	2.5	47.5	50.4	11.6	43.2	6.3
Costa Rica	51.1	4.734	2.3	46.2	46.6	22.0	28.4	2.5
Panama	75.5	3.738	2.4	48.6	44.2	26.6	34.8	12.3

Note: The EAP is comprised of persons aged 15 years or above supplying their labour to produce goods and services.
Source: author's elaboration from CEPALSTAT (2018) and PIAALC (2015).

Along the Central American territory the workforce is mixed-race, and indigenous, black and *mestizo* workers usually endure more disadvantages (Hopenhayn, Bello, & Miranda, 2006; Pérez-Brignoli, 1989; World Bank, 2015). Indeed, related to Guatemala's lower average educational attainment is the higher representation of ethnic minorities as well as rural workers. Also in Honduras, as it will be commented in the following paragraphs, the persistent importance of the agricultural sector in the generation of employment and the slower diversification of production reflects on a more rural composition of their workforce compared to other countries (PEN, 2008).

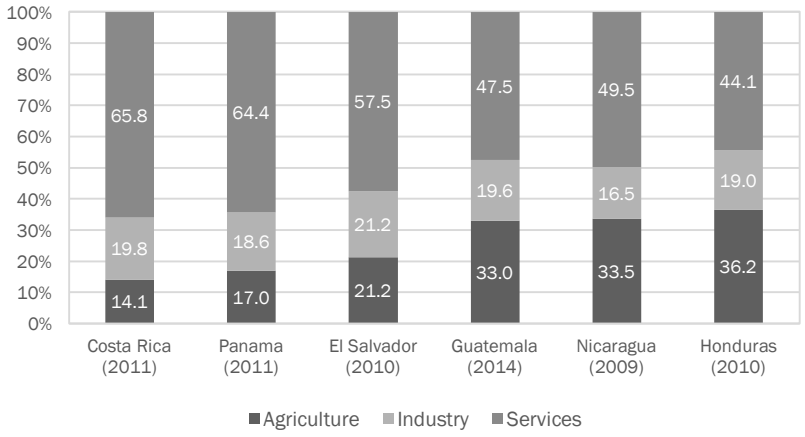
3.2.1 Evolving industrial structures

The proportion of employment in the agricultural sector has been shrinking in the isthmus at the time that the service sector expands, and industry remains rather stable due to a lack of investment in more productive and knowledge-intensive areas (Beteta & Moreno-Brid, 2014; Buonomo Zabaleta, 2013). [27] Costa Rica is one of the few Latin American countries that stand out in this regard. Their more developed industrial sector in high-tech manufactures of medical devices, biotechnology and pharmaceuticals, has moved the country up the global value chain, thus increasing profits along with wages and innovation (Colburn & Cruz, 2007; Sánchez-Ancochea, 2009).[28]

[27] Although the secondary industry sector appears small in all countries, the *maquila* – factories of textile and apparel manufacturing established in tariff-free zones – continues to be an important source of employment in Nicaragua and the Northern countries. This is relevant since working conditions in the *maquila* are distinctively precarious, as thoroughly describe Prieto & Quinteros (2004, p. 149): "long work shifts, low salaries, inadequate infrastructure in terms of safety and hygiene, constant complaints that workers are mistreated by management and that production goals are too high, excessive control over the workers (for instance, no free access to the lavatory), frequent overtime hours (which are often obligatory and not properly compensated), discrimination against pregnant women, and sexual harassment. Freedom of association is almost a taboo subject for the workers in these factories".

[28] Costa Rica has a longer history of FDI in high-tech, that started with the establishment of Intel in 1996.

Figure 3.1. Central America, circa 2011: Structure of total occupied population, by main sector of economic activity and country



Source: author's elaboration from CEPALSTAT (2018).

In Figure 3.1, it is observed that around 2011 agriculture was still representing a third of employment in Guatemala (33%), Nicaragua (34%) and Honduras (36%); being less important in Costa Rica (14%), Panama (17%) and El Salvador (21%). On the contrary, the tertiary sector of services and commerce figured as – and continues to be – the main generator of employment across countries, representing around two thirds of jobs in Panama, Costa Rica and El Salvador, as well as around half of jobs in Guatemala, Nicaragua and Honduras. Services also contribute the greatest share to GDP in all countries.

On a related note, by the year the ECCTS was conducted, employment in the public sector already represented a low proportion of total employment in Central American countries: according to ECLAC's data, the highest share was 16% in Panama, followed by Costa Rica with 11%, and it was below 10% in the rest of the countries

3.2.2 Unemployment, informality and migration differentials

In some Central American countries, unemployment rocketed following the civil wars, but by 2011 all states managed to keep it below 8% (Table 3.3). At the time when the ECCTS was conducted, open unemployment was remarkably lower in Guatemala and Panama, with rates below 4% that are often considered full employment. Nevertheless, the generally low unemployment may be concealing other issues like time-related underemployment (part-time workers preferring full-time hours) and high rates of self-employment or employment in the informal sector. This is said to be the case for most developing countries, where "workers simply cannot afford to be unemployed" given the weakness of unemployment protection systems (OECD, 2015, p. 212; PEN, 2008).

Table 3.3. Central America circa 2011: unemployment, informality and migration rates

	Annual unemployment rate (%)	2010 labour force in the informal sector (%)	Annual net migration 2010-2015 (migrants per thousand persons)
Guatemala	3.1	55.1	-1.0
El Salvador	6.6	55.0	-7.3
Honduras	6.8	50.8	-1.3
Nicaragua	5.9	43.4	-4.0
Costa Rica	7.7	35.7	2.7
Panama	3.6	34.3	0.6

Note: Informality figures refer to the percentage of the total urban employed population that are employers or employees from microenterprises, domestic workers, and non-skilled independent workers.
Source: author's elaboration from CEPALSTAT (2018) and CEPAL (2011).

Actually, in Central America the greatest part of employment is created in the informal sector, especially for female, young and low-educated workers. By 2011, the rate of informality in the so-called Northern Triangle (Honduras, El Salvador and Guatemala) was above the Latin American average of 45% (Table 3.3). Even in Costa Rica and Panama, informality rates have remained stagnant despite their economic progress, contesting the 'catching-up' statements of some modernisation theorists (e.g. Harris & Todaro, 1970; Lewis, 1954).

Outmigration from Central American countries has also worked as an escape valve, contributing to keep unemployment rates to a minimum. Interestingly, the net migration rates by country observed in Table 3.3 may also be indicative of unsatisfied expectations around salaries, job security and other country differentials in the quality of jobs provided. According to Buonomo (2013, pp. 9–10), the long-lasting intraregional migration that characterises the sub-region "results from the conjunction of the lack of decent work opportunities in the place of origin, the economic structure and the labour market in the destination country", in addition to the existence of networks, territorial connection, and family reunification.

Most Central American countries – especially the Northern Triangle – present high emigration rates, with outflows of working population predominantly headed to the Unites States.[29] By 2011, El Salvador, Guatemala, Honduras and Nicaragua had the largest numbers of nationals living abroad, all showing negative net migration (see Table 3.3). The region also hosts one of the most notable patterns of South-South migration: in 2011, the total number of international migrants in Costa Rica represented up to 9% of the population, a great part of which comes from the neighbouring Nicaragua.

[29] The 2010 US Population Census registered nearly three million Central Americans residents, more than half of them born in El Salvador.

3.3 Labour institutions

According to research undertaken by Funkhouser (1996, p. 1737), although the countries of the isthmus may present many socio historical similarities: "there have been significant differences in social policy and political developments that have produced a diversity of labour market institutions in the region". In the following paragraphs, I give a brief description of how some of these institutions perform in Central American countries, drawing on the abundant comparative data raised by the ILO's Regional Office in Costa Rica and other organisations with local incidence.

3.3.1 International and national labour legislative frameworks

All six countries in the study had ratified the 8 fundamental ILO conventions by 2011. El Salvador, however, adhered to most conventions far more recently than its counterparts, as observed in Table 3.4. On the other hand, of the 190 conventions covering the topics of labour rights, workplace participation, equality, job security and administration, it is observed that El Salvador and Honduras are also the countries that fewer ILO conventions have subscribed. Meanwhile Guatemala has ratified more than 70. Nevertheless, the ILO has revealed that in Central American countries there is a generalized 'weakness of the institutional mechanisms created to verify and enforce' the rights incorporated into national legislations (ILO 2003 in PEN, 2008, p. 167).

Additionally, all countries enjoy strong and extensive labour codes that formally recognise workers' fundamental rights, including: minimum wages, work contracts, social security, retirement benefits, training, occupational safety and health, working and resting time, maternal care, freedom of association as well as collective bargaining (ILO 2003 in PEN, 2008). Overall, as far as labour codes and regulation contents concern, experts suggest that "there are no substantial differences between the countries of the isthmus – nor between them and the more developed countries" (PEN, 2008, p. 160). Indeed, only a few qualitative differences can be observed in Table 3.4. For instance, since Costa Rica begun to industrialise somewhat earlier than its neighbours, it was one of the first countries to adopt a strong labour code regulating the matters above mentioned (Colburn & Cruz, 2007, p. 67).

Regarding regulations concerning pay, it is documented that by 2011 Guatemala and Honduras had national averages of statutory minimum wages as high as those in Panama and Costa Rica (approximately US$ 560, PPP), while Nicaragua and El Salvador presented minimum wages significantly lower (US$ 300 – US$ 350, PPP). Today, Panama and Costa Rica standout by having a more diversified minimum wage structure, with over 30 salary levels depending on industry, occupation or skill level, also on establishment size and region, in the case of Panama.

Table 3.4. Central America: adherence to ILO Conventions by country

Country	Fundamental								Governance (Priority)	Technical	Total
	Freedom of association		Forced labour		Discrimination		Child labour				
	C087	C098	C029	C105	C100	C111	C138	C182			
Guatemala	1952	1952	1989	1959	1961	1960	1990	2001	4	61	73
El Salvador	2006	2006	1995	1958	2000	1995	1996	2000	4	18	30
Honduras	1956	1956	1957	1958	1956	1960	1980	2001	3	15	26
Nicaragua	1967	1967	1934	1967	1967	1967	1981	2000	2	52	62
Costa Rica	1960	1960	1960	1959	1960	1962	1976	2001	4	39	51
Panama	1958	1966	1966	1966	1958	1966	2000	2000	3	67	78

Source: ILO's NORMLEX Database, Information System on International Labour Standards (last access: 10 March 2017).

Table 3.5. Central America circa 2011: Selected labour legislation indicators

Country	Year of issue Labour Code [a]	Statutory minimum wage in USD/PPP [b]	Normal weekly hours of work [c]	Weekly hours national limit [c]	Additional legal instruments on OHS [a]
Guatemala	1961	558	42-45 hrs.	60+ hrs.	Reglamento General sobre Higiene y Seguridad en el Trabajo (2014)
El Salvador	1983	358	42-45 hrs.	(No limit)	Ley General de Prevención de Riesgos en Lugares de Trabajo (2012)
Honduras	1959	581	42-45 hrs.	60+ hrs.	Reglamento General de Medidas Preventivas de Accidentes de Trabajo y Enfermedades Profesionales (2004)
Nicaragua	1945	300	48 hrs.	49-59 hrs.	Ley General de Higiene y Seguridad en el Trabajo (2007)
Costa Rica	1943	578	48 hrs.	60+ hrs.	-
Panama	1971	575	48 hrs.	49-59 hrs.	Reglamento General de Prevención de Riesgos Profesionales (2011)

Source: (a) ILO's NATLEX database and Carmenate-Milián et al. (2014), (b) ILOSTAT, (c) ILO's Travail Legal Database.

As for regulation concerning WTQ it is observed that, by 2012, Costa Rica, Panama and Nicaragua fell within the group of 48 hours as legal extension of the working week, while the other half fell in the group of 42-45 hours. At the same time, in ILO's NATLEX database, Costa Rica appears as the only country with specific legal provisions about night work. While Honduras has been the only country in Central America implementing a law of hourly work which is believed to encourage higher working time flexibility (Honduras, 2011).

The improvement of the physical work environment through occupational safety and health (OSH) regulation has been among the priorities of Central American governments during the last decade. El Salvador was one of the latest to update a law for risk preventions in the workplace (Decree Law No. 254), while Guatemala is the only country whose legislation does not include a definition of occupational accidents and diseases (Carmenate-Milián et al., 2014, p. 26). In all six countries, OSH laws make at least some reference to psychosocial risks, but legal provisions aimed at improving the quality of the social environment of jobs are generally less developed. A similar claim can be held regarding regulation of work intensity.

3.3.2 Workplace inspection

From the number of reports revised, it can be gathered that all Central American states rely enormously on Labour Inspection Systems to enforce their national set of labour regulations and international labour standards. Although there is not much comparative data about the relative capacity of these institutions across the isthmus, there are a few country specificities to highlight regarding: the number, efficiency and expertise of their human resources; the dimensions of work inspected; and the sanction or preventative approach taken.[30]

First, from the perspective of efficiency of resources, Panama, El Salvador and Costa Rica appear to have more capable LIS in terms of the number of actions per inspector and in terms of the number of workers inspected. El Salvador and Costa Rica also report a higher ratio between the number of inspectors and workers (Table 3.6).

By 2011, there were no significant variations in the legal organisation and functions assigned to the LIS across Central American countries; in all of them, the Inspectorate had legal base, its functioning was regulated, and counted on procedural or technical manuals and protocols to guide the inspection process (Godínez, 2011). Compliance with minimum legal wages is an area that all LIS have prioritised, especially in Costa Rica where a powerful national campaign to strength inspection on this type of infractions was launched in 2010, with proved success (Gindling, Mossaad, & Trejos, 2015).

As suggested by statistics of the corresponding Labour Ministries, other areas frequently inspected in all countries are those associated to the extension of working time, changes in schedule, rest days, overtime, and compliance with legal breaks and holidays. Although the data is not directly comparable, in 2011, infractions regarding holidays and weekly breaks were the least frequent in Costa Rica, whereas in Nicaragua, infractions associated with working day, breaks, leave and vacations were the most frequent in 2010. Then, violations to OSH norms are also strongly inspected across the isthmus, and the highest fines are usually imposed in this area (Godínez, 2011). El Salvador was the latest country to issue a law aimed at strengthening inspection in this regard. In turn, conditions conducive to better quality of social environment are rarely inspected, presumably due to the scarce regulation existing around those aspects of job.[31]

[30] For a detailed – though not strictly comparative – description of national labour inspection systems in Central American countries see Ciudad Reynaud (2011).

[31] Only for Costa Rica and El Salvador was possible to find disaggregated and systematic statistics of infractions related to abusive behaviour in the workplace since 2011 up to 2016. Even though these statistics are not comparable, their sole existence may indicate more awareness of such dimension of JQ in these countries.

Table 3.6. Central America circa 2009: labour inspection performance indicators

Country	Number of inspectors	Number of inspection actions	Actions per inspector	Labour force (thousands)	Inspectors per 1000 workers
Guatemala	238	13131	55	5769	0.04
El Salvador	159	29728	187	2552	0.06
Honduras	120	15277	127	3237	0.04
Nicaragua	96	6861	71	2283	0.04
Costa Rica	93	14385	155	2043	0.05
Panama[a]	57	11095	195	1332	0.04
Total	763	90477	119	17216	0.04

Note: 'Number of inspectors' includes sub-inspectors, contrôleurs du travail, technical labour inspectors. 'Inspection actions' is the total number of individual workplace visits, follow-up visits and document reviews, as well as advisory or preventive services and consultations. (a) Panama figures correspond to 2010.
Source: ILO (2011) and labour force estimates from ILOSTAT.

Lastly, it has been documented that LIS in Central America lack coercive power to sanction violations to labour legislation. However, nowadays only in Costa Rica and in Panama, resolutions and sanctions remain responsibility of the judicial power. On the contrary, in El Salvador, Nicaragua, Honduras and Guatemala, these functions are down to the inspectors, who are directly entitled to impose fines (Godínez, 2011).[32] Despite the higher discretion, the efficiency of such sanctions is low, mainly because the pecuniary penalties are too low as to dissuade employers to violate the law (ILO, 2010). Moreover, based on the Nicaraguan case, Ortega (2008) argues that the sanction capacity given to inspectors goes in detriment of the time they have to inspect, therefore the impact of inspection is not necessarily perceived.

3.3.3 State's role amid economic liberalisation

Along with growing privatisation of enterprises, purchase of national firms by foreign investors, flexibilization of property rights and reformulation of labour norms, the expansion of Free Trade Zones (FTZs) or Export Processing Zones (EPZs) has been a common strategy pursued by Central American countries to attract FDI and integrate into the global economy (Robles, 2011). Poor working conditions, lack of inspection and antidemocratic labour practices are often associated with jobs in these areas (Prieto & Quinteros, 2004). The fact that Panama and Costa Rica have larger inflows of FDI (see Figure 3.2), may suggest that their average JQ is worse than in other countries.

In Central America it is also possible to distinguish different types and different qualities of foreign investments whose contributions to development depend on the regulatory environment of the host country. For instance, Robles (2011) claims that the process of economic liberalisation – including expansion of FTAs – and its impact on workers' well-being was more severe in El Salvador compared

[32] Honduras and Guatemala have both recently passed legal reforms on their LIS aimed at strengthening their discretion, but their effects were not seen back in 2011.

to Costa Rica, where the state remained more present. Some investors have clearly opted for countries with abundant, cheap labour force, while others prefer a disciplined and skilled workforce, reason why 'El Salvador get much less FDI than Costa Rica despite having a much more attractive index of economic freedom' (Mora, 2005, p. 284) as demonstrated in Figure 3.3. More literature supports this argument, stating that Costa Rica has fared better with economic liberalism than its neighbours because of:

> "…the vigorous role for the state in the economy, but without a disdain for the private sector. The labour force was respected, healthy, educated, and nurtured (…). What emerged in Costa Rica was not an abrupt embracing of economic liberalism – of unfettered markets – but instead a slow, gradual reform" (Colburn & Cruz, 2007, pp. 69–70).[33]

Sánchez-Ancochea (2009) also highlights the partial success of Costa Rica in industrial upgrading through foreign investment in the high-tech sector, which is greatly attributed to the central role that the state – rather than pressures from private-sector firms – has taken in attracting a more diversified, selective and dynamic set of foreign investors. Moreover, Goss & Pacheco (2011) emphasise the active role of the Costa Rican state in shaping the policies and incentives for economic liberalisation, without weakening its democratic institutions like insistently demanded the Bretton Woods organisations. Costa Rica managed to diversify its service industry, incentivise export, participate of FTAs and expand its private financial sector without reducing public expenditure.[34]

On the contrary, national reports generally suggest that states in Guatemala, Honduras and El Salvador have shown less capacity to protect worker's rights amid economic liberalisation, thus negatively impacting on JQ. This weaker capacity, in turn, has been typically followed by a more vigilant role of job quality from private foreign investors. The CAFTA-DR – a FTA with the US in which all Central American countries participate – is a good case to describe the role played by the Northern Triangle countries and the U.S. in labour rights enforcement. Both the states of Guatemala and Honduras have been involved in major public complaints filed by the U.S. Department of Labour's Office of Trade and Labour Affairs (OTLA), due to the violation of some of the provisions of the CAFTA-DR regarding workers' rights.[35] These cases are only examples of how local governments can have a passive role in

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[33] Colburn & Cruz (2007) also suggest there was an idiosyncratic element that enabled Costa Rica to have stronger institutions and better economic outcomes than its neighbours: their egalitarianism, which contrasts with the more pronounced class distinctions in Nicaragua.

[34] It should not be omitted that during the 80s Costa Rica also received much aid from the United States –UASAID– that sought to protect its political and economic stability against the threat of the Nicaraguan Sandinismo (Soto 1991 in Goss & Pacheco, 2011).

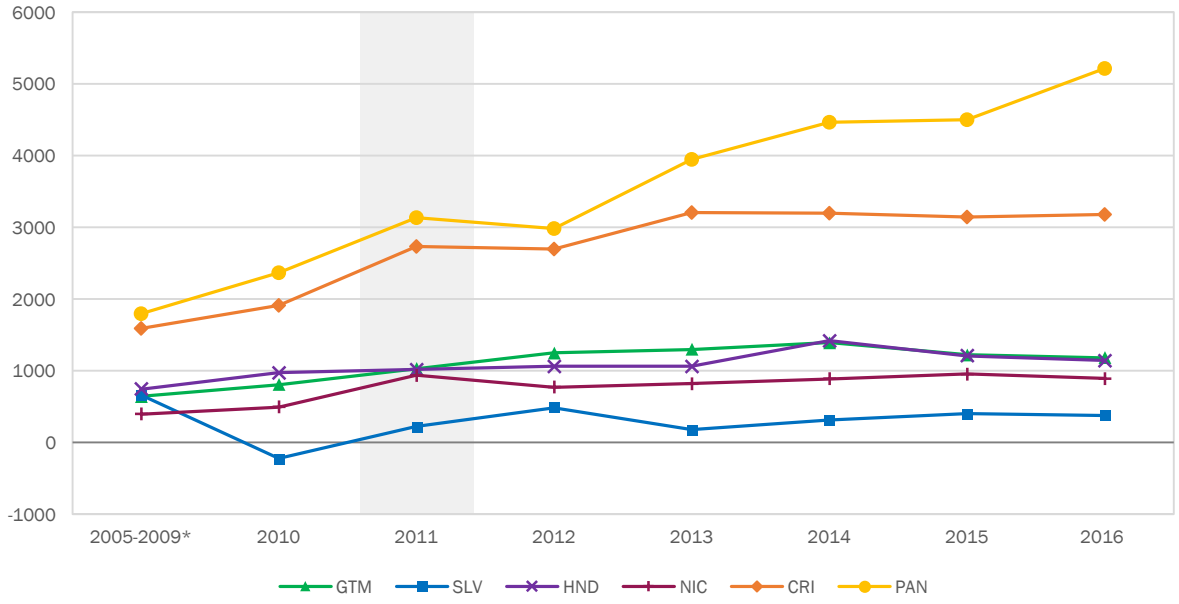
[35] In 2008, six Guatemalan labour organisations filed a public complaint with the U.S. Department of Labour's Office of Trade and Labour Affairs (OTLA) due to Guatemala's violation of Chapter 16 of the CAFTA-DR, a chapter that concerns compliance with workers' rights and provision of transparent judicial procedures. In 2013, both parties agreed on an 'Enforcement Action Plan' containing 18 specific corrective actions to be taken by Guatemala within certain deadlines, but even after been granted successive time-extensions, non-compliance persisted, leading to the U.S.' decision to establish an

protecting workers' rights in a context of increased economic openness, and how foreign consumers compensate those gaps by demanding higher compliance with international agreements. In the case of El Salvador, even before the CAFTA-DR came into force, local reports indicate that private North-American brands in the apparel sector played a major role in improving labour standards against the lack of state regulation:

> "International brands related to the local *maquila* play an important role, since they themselves verify that their suppliers maintain working conditions adequate to the legal requirements." (GMIES, 2004, p. 70).

> "In fact, the few labour unions have been formed through the support that some brands have given to freedom of association rather than through government mediation. Moreover, some transnational companies, such as Phillips Van Heussen and Gap, have asked the Salvadoran government to pay more attention to problems of freedom of association in *maquila* factories" (Quinteros 2002 in GMIES, 2004, p. 17).

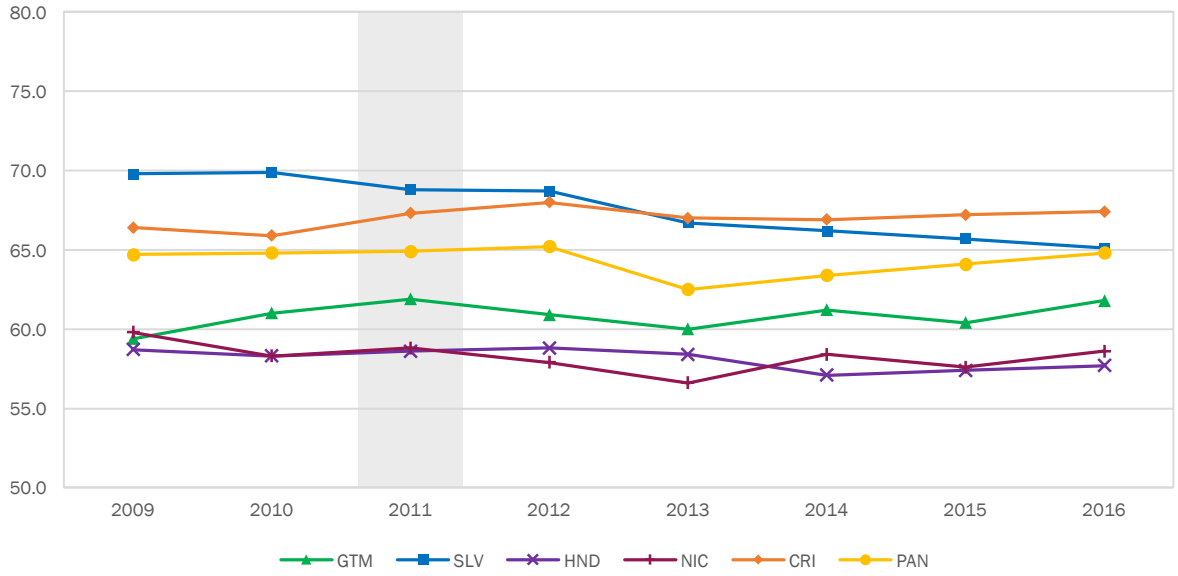
Figure 3.2. Central America 2005-2016: foreign direct investment inflows by recipient countries (million dollars)



Note: (*) Simple averages. Due to methodological changes, data prior to 2010 are not directly comparable with data from 2010 and later.
Source: author's elaboration based on CEPAL (2017).

'Arbitral Panel' as stipulated in Chapter 20 of the CAFTA-DR. By the time this research was being conducted, the arbitrary panel had twice-delayed its decision to issue a sanction. Meanwhile, in 2015, the ILO announced its intention to establish a Commission of Inquiry to review Guatemala's non-observance of the fundamental right of freedom of association. Also in the context of the CAFTA-DR, a similar complaint was filed against Honduras in March 2012 by the U.S. union federation AFL-CIO and 27 Honduran unions and civic organisations. That complaint pointed to the lack of compliance with labour rights in the export sectors of manufacturing, agriculture and port operations, and referred to 'freedom of association, the right to organise and bargain collectively, child labour, and working conditions' (Barrios, 2013, p. 115).

Figure 3.3. Central America 2005-2016: Index of Economic Freedom by country (0-100)



Source: author's elaboration based on The Heritage Foundation (2017).

3.3.4 Quality of industrial relations and social dialogue

As described above, since the early 1980s Central American countries have undergone an intensive process of economic restructuration. Traditional economic sectors, that were the basis of workers' organisation, gradually shrank, giving way to new economic sectors where trade unions are notably weaker if not absent, and their role highly questioned (Sepúlveda & Frías, 2007).

Currently, unions in Central American countries are not as powerful as to have a notable impact on the quality of their jobs; neither in terms of density, nor in terms of employees covered by collective bargaining (i.e. the degree to which collective agreements regulate the wages and working conditions of those in employment). Moreover, union density rates in the isthmus are some of the lowest in The Americas, even if such numbers may not faithfully reflect their bargaining power (Hayter & Stoevska, 2011). As evidenced in Table 3.7, countries rank differently in of these each indicator, making it even harder to derive any hypothesis on how industrial relations could impact on country-level JQ. For instance, Costa Rica has by far the highest rate of collective bargaining coverage, but ranks in the middle in terms of density rate; while Panama has the highest density rate, and the lowest bargaining coverage.[36]

[36] According to Hayter & Stoevska (2011) union density numbers may conceal the existence of other sorts of labour organization that can also have a positive effect in improving working conditions, which may be the case of *solidarista* organisations in Costa Rica, who represent around 18% of salaried workers (Robles & Arias, 2013).

Table 3.7. Central America circa 2011: trade union density and collective bargaining

Country	Latest Year	Trade union density rate (%)	Latest Year	Collective bargaining coverage rate (%)
Guatemala	2013	2.5	-	-
El Salvador	2012	9.8	2012	4.5
Honduras	-	-	2007	5.5
Nicaragua	2010	5.3	2010	9.0
Costa Rica	2013	6.7	2008	16.2
Panama	2012	23.4	2012	2.3

Source: ILOSTAT database.

On the other hand, there is a country differential in terms of the scale of sentiments and actions against unions. For instance, ITUC's Global Rights Index has persistently ranked Guatemala and Honduras as two of the worst countries in the world regarding the practical guarantee of workers' rights:

> "There is systematic and widespread impunity for crimes against trade unionists, including killings, attempted murders and physical attacks. Governments are blatantly neglecting their duty to ensure that workers are able to carry out their trade union activities in a safe environment" (ITUC, 2015, p. 58).

At the opposite end, Costa Rica has been ranked as the best country in the region in terms of labour protection environment, but still denoting 'deficiencies in laws and/or certain practices which make frequent violations possible.' In addition, local research claims that women's needs, in particular, have been weakly represented in traditional unions, which perpetuate the patriarchal structures of the society to which they belong (OIT, 2013; Prieto & Quinteros, 2004, p. 151).

Henry Frundt (2002) gives a more optimist account about the survival of Central American unions in the process of globalisation, stating that they 'painfully' adapted to the new economic order of subcontracting, privatisation and deregulation. Moreover, the author maintains that in this threatening globalising context, unions learnt to extend their organisation power to women workers, who "proved more sensitive to issues of equal pay, maternity and child care, health, and sexual harassment" (Frundt, 2002, p. 34).

The previous paragraphs contribute to depict the similarities and multiplicities that exist within the small Central American isthmus regarding the countries' political and socioeconomic circumstances, their labour markets, and their labour institutions.

4 Mixed methods of data compilation and analysis

This chapter contains all the methodological considerations involved in the construction of the JQ indices, and the treatment of other variables included in the analysis, such as well-being outcomes, informality and demographics. The operationalisation of all concepts is described in great detail to enable replication and an adequate interpretation of results.

4.1 Research philosophy and purposes

The question leading this research is about the validity and convenience of a multidimensional indicator of Job Quality (JQ). To answer such an enquiry, a *positivist* stance is taken as a starting point assuming the following. First, that we can describe and measure work-related capabilities through secondary survey data. Second, that job characteristics can be compared across groups of workers as well as countries, provided an appropriate aggregation of indicators. Third, that there is a minimum identifiable set of job features that objectively affect workers' well-being irrespective of individual and cultural differences. In this regard, we rely on the success of other studies framed in the CA that have adopted a positivist view to identify a set of universal capabilities through different quantitative methodologies, such as multivariable analysis, structural equation models (SEM), or factor analysis (Ibrahim & Tiwari, 2014).

Additionally, the purpose of using a mixed-methods research design is to take one step further in the validation of JQ measures: first, by interpreting the observed data within a wider institutional context and, second, by contrasting the opinions of local authorities against the prevailing operationalisation of JQ done by Green and Mostafa in Eurofound (2012). Alongside the positivist perspective, the constructivist approach has been widely valued in the literature on capabilities since it allows to confirm, define or expand the list of central capabilities (Ibrahim & Tiwari, 2014).

Accordingly, the first stage of this research follows a *deductive* approach in the sense that we use survey data to test those hypotheses about the distribution of JQ across groups of workers and countries, as well

as about the effects of JQ on well-being. The study also draws on primary and local information to identify if there is consensus among actors about the central features of a good job, and if there are other latent dimensions not included in the current body of theory. It is only in this sense that the data would *induce* new knowledge about the phenomenon of JQ in Central America.

Given the complexity of the capability concept, the adoption of mixed-methods of analysis and a combination of data sources is particularly praised in the field. Ibrahim & Tiwari (2014, pp. 18–19) expressly state that various steps can be complemented to identify the relevant capabilities in a given domain: "(a) drawing on the literature and previous attempts that sought to identify central capabilities; (b) checking for consensus on these domains in different survey instruments; (c) exploring data availability on these domains; (d) checking the relevance of the identified domains through public deliberation; and, finally, (e) identifying other 'missing' dimensions through in-depth contextualised methods."

4.2 Unit of analysis and research setting: *jobs* in Central America

Following Eurofound's framework, the primary unit of analysis are the *jobs*. This must be differentiated from the unit of observation, which in this case is the surveyed worker, who reports about the characteristics of the job held, allowing to gather data on the individual scale. Whereas measuring JQ at the job level could be a simple decision of research design, in this study becomes crucial because it follows directly from the individual centrality fostered by the CA. Moreover, it is what distinguishes Green and Mostafa's model from various other approaches that measure JQ at the country level only.

The selection of the Central American isthmus as the research setting was driven by a combination of convenience and relevance. The first reason was the availability of the ECCTS, which allowed analysing the relationships between health and the various dimensions of work, from an international comparative perspective.

Secondly, Central America is a small manageable region comprised of six countries that share a roughly common geographical, cultural, and historical background. At the same time, the six cases have very different levels of socio-economic development, which makes cross-country comparisons all the more interesting. Against usual suspicion, Eurofound's 2012 report demonstrated that Green and Mostafa's indices were equally able to measure JQ in highly developed countries like Norway, and less developed nations like Turkey. Trying to push that assumption even further, the current research evaluates whether such indices can measure JQ in two regions as economically and culturally different like Central America and Europe.

Thirdly, Central America has been characterised by having the highest levels of economic informality in the American continent, which provides valuable opportunity to test if JQ scales reflect the precarious working conditions often associated with the informal sector or if, instead, they provide new knowledge about those working aspects that have a stronger effect on well-being.

4.3 Quantitative analysis of secondary survey data

The use of large scale survey data is best suited to the purposes of this research in that it allows analysing a wider range of indicators of JQ, without compromising statistical validity. Structured surveys are the most suitable data source for performing multivariable analyses, identifying systematic associations, making comparisons and inferring patterns to the population (Sapsford, 2007). Moreover, if repeated periodically, surveys also allow analysing trends over time. The use of structured and homogeneous questionnaires in survey research is the *sine qua non* of research replicability and international comparability.

On the other hand, using secondary survey data poses some limitations. In our case, since the data were collected by other researchers, there were increased time costs involved in familiarising with the dataset, the sampling methods, and with the weighting procedure used. Additionally, given that the original purpose of the survey was somewhat different to our research objectives, the full range of variables required was not available, meaning that the research questions had to be tailored to adapt the existing data.

Regardless, after knowing the scarcity of statistical and comparable data in the field of JQ and capabilities studies, the sole existence of a dataset like the ECCTS should be taken as a breakthrough that outweighs the drawbacks commonly associated to the use of secondary sources. As of the time this dissertation was written, the ECCTS was still the only survey in the developing world that examines JQ at an international scale, in a comprehensive way, and of public domain[37].

[37] Users can request access to the First ECCTS database and questionnaire by emailing their research team Principal Investigator, Professor Fernando G. Benavides from CiSAL-Universitat Pompeu Fabra, at fernando.benavides@upf.edu and completing an application form for the use of the data.

4.3.1 The Central American Survey on Working Conditions and Health (ECCTS)

The First ECCTS is a cross-sectional survey conducted at the individual level between July and December 2011, in six Central American Spanish-speaking countries: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama.[38]

The survey was jointly commissioned by the National Institute of Safety and Hygiene at Work in Spain (INSHT) and by the Ibero-American Social Security Organization (OISS).[39] The execution of this first wave received the technical assistance of three academic organisations that helped to design a methodology of a high standard, namely: the Health, Work and Environment Programme of the National University of Costa Rica (SALTRA); the Southwest Centre for Occupational and Environmental Health of the University of Texas (SWCOEH); and the Health Research Centre of the *Universitat Pompeu Fabra* in Spain (CISAL). The Central American company Borge & Asociados (B&A) was responsible for the data collection and codification.

The public dataset contains 180 variables distributed across eight modules: general information (6 items), employment conditions (21), company characteristics (15), working conditions (58), violence in the workplace (11), health and well-being (46), medical care and preventive resources (7) and demographic characteristics (16). Although the survey was meant to gather data on occupational health as a primary objective, it covered several variables on JQ that were similar to the battery of questions included in the Fifth EWCS, offering a unique opportunity for replicating Green and Mostafa' JQ indices. In fact, the questionnaire of the EWCS was one of the three instruments that served as input for the design of the Central American questionnaire, together with the INSHT's Sixth Spanish Survey on Working Conditions, and the ILO's Manual of Occupational Injury Statistics (Fernando Benavides et al., 2014).

Adequacy of sample design and weighting factors

The target population in the ECCTS was comprised of all people aged 18 or over, who were working or had worked for pay or profit for at least an hour in the week preceding the interview. The sample covered workers under both formal and informal working arrangements. It also included those who

[38] According to the newsfeed of CISAL Group, at University Pompeu Fabra, the fieldwork of the Second ECCTS began on February 10th 2018 and it was scheduled to be finished by the end of August 2018. Source: CISAL (2018, February 26). II Central American Survey of Working Conditions and Health (2018). Retrieved from: www.upf.edu/web/cisal/noticies/.

[39] The ECCTS project was born as part of the Ibero-American strategy for safety and health at the workplace (2010-2013), promoted by the OISS and endorsed by the 19th Ibero-American Summit on December 2010 in Estoril, Portugal. The survey was demanded as a way to comply with the first and fourth specific objectives of the strategy, respectively: "to know the safety and health status of workers in each country" and "to improve information systems and registration of occupational accidents and diseases" (B&A, 2011; F. Benavides et al., 2013; OISS-INSHT, 2012a). Its main objective was, therefore, to collect useful information on health and working conditions that helps governments to adequately address public policies of occupational health and safety in these countries.

declared having a job, but that were absent from work due to illness, vacation or other reasons (Benavides et al., 2012).[40]

The sample was selected using a multi-stage stratified and randomised method that covered 12,024 cases in the region, corresponding to a representative set of 2,004 observations per country.[41] This sample was large enough as to obtain a +/-0.89% margin of error for the regional results and +/-2.19% margin of error for each national subset, with a confidence level of 95%.

The end-to-end response rates were more than acceptable, ranging from approximately 50% in Costa Rica, to 60% in Honduras and 80% in the other countries (Benavides et al., 2013); the acceptance rate was over 80% except in Costa Rica (53%) (Benavides et al., 2012).[42]

Since the sample surveyed may differ from the target quota or from the real proportions of each national population in the continent, the ECCTS dataset included two weighting variables to improve representation of the working population in Central America, and to minimise the risk of selection bias. The first one (*PesosCA*) corrects for the relative size of each national population; it is used for analyses at the regional level, that is, for the whole of Central America. The second factor (*PesosP*) corrects individuals' representation in terms of gender, age (<30, 30-50, >50 years) and economic sector (primary, secondary and tertiary) of the economically active population; it is used for analyses at the country level, including comparisons between countries.[43] Although the weights are not expected to alter the results significantly, their use makes cross-country comparability more feasible, insofar the demographic variables used for setting the quotas and weighting factors are closely related to JQ. Certainly, as commented by Jensen (2015), considering occupation would have been even better for representation purposes. Regardless, the problem pointed out by Jensen reaches a dead-end, due to the fact that most Central American countries simply do not produce census occupational data at the department level.

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[40] The definition of people in employment follows the guidelines of the International Labour Force Statistics, and it is the same definition used in the EWCS. People in collective housing like hotels, convents, barracks and hospitals, were excluded, except for the families residing in these places, as may be the case of establishment managers, housekeepers, porters, etc. (B&A, 2011).

[41] To reduce bias, the ECCTS designed its sample frame based on the most recent population census available in each country (Guatemala 2002, Nicaragua 2005, Costa Rica 2000, Panama 2000), and by the latest electoral rolls in El Salvador and Honduras (2009 and 2004, respectively) because the census data in these two countries did not reach the locality or segment level. The sampling design procedure was multi-stage, stratifying departments or provinces according to the population size, and randomly selecting primary and secondary sampling units, specifically: 167 census segments per country to interview 12 adults in each segment (see OISS-INSHT, 2012a for a detailed explanation on the selection of primary units in each country).

[42] According to Benavides, the lowest response rate in Costa Rica could have been a source of selection bias given that this was the first country surveyed.

[43] Of note, in the technical reports there is no information about the inclusion of a household weight as a third type of expansion factor, which should correct for sampling probabilities in accordance to the household size (i.e. instead of being treated as single person household with 100% chance of being interviewed, the results should account for the fact that may have been more eligible interviewees in the same household).

Other methodological considerations about the ECCTS

During the conduction of the survey, a number of methodological procedures were followed which are worth mentioning as supporting evidence of the data quality. For instance, to ensure the comprehensibility of the questions and to verify the sampling methodology, the instrument was first tested through 144 pilot interviews that covered urban and rural areas of the six countries (B&A, 2011; Benavides et al., 2013; OISS-INSHT, 2012b). In consonance with the recommended criteria for survey research (De Vaus, 2013) the ECCTS managed well to avoid possible sources of response bias in terms of length, wording and order of the questions, as well as regarding the structure of the response alternatives. Another methodological virtue of the instrument is that it was applied through face-to-face interviews at respondents' homes, thus minimising the risk of response bias by pressure from employees' workplaces or employers.[44]

The transparency and objectivity with which the responsible team disseminated the data, is also a testament to the methodological quality of the ECCTS. The questionnaire, technical and fieldwork reports, as well as the primary results of survey are fully disclosed and accessible through the OISS and SALTRA websites. Moreover, the fact that there were no Central American governments involved in the data collection, and that the process counted with the technical assistance of three international academic institutions, increased the chances that the data was treated with objectivity, without serving to partisan interests.

The main downside of the ECCTS lies in its cross-sectional nature, which removes any possibility of undertaking a statistical causal analysis of the determinants of JQ at the country level, or about the effect of good jobs on well-being. Another disadvantage is the lack of variables capturing other dimensions of workers' well-being beyond health. The existence of alternative well-being indicators such as subjective work-life balance, job satisfaction, consumption power, leisure time and health of family members, would have allowed for a more robust validation of the indices. Additionally, as Lugo (2007) notes, one of the weaknesses of many surveys specialised in employment and working conditions, like the ECCTS, is that they do not generally include "extensive questions on the household and its members", making it impossible to establish associations between quality of work and other spheres of well-being at the household level.

The following sections describe the main concepts analysed throughout the study (job quality, informality, well-being and socio-demographics) and the way they were measured through the ECCTS dataset.

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[44] Domestic workers were interviewed only if present in their own dwellings.

Table 4.1. Operationalisation of Job Quality Indices adapted to available items in ECCTS 2011

Index	Dimensions (content)	ECCTS Items used for construction	
EARNINGS	Monthly earnings	g73	In your main job, what has been your average monthly income over the last three months?
	PPP [(a)]	GTM SLV HND NIC CRI PAN	2011 Price level ratio of PPP conversion factor (GDP) to market exchange rate = 0.47 = 0.50 = 0.52 = 0.40 = 0.69 = 0.55
PROSPECTS	Prospects	-	(Not available items)
WORKING TIME QUALITY (WTQ)	Work duration, schedules, control over working time short-term flexibility	a18	How many hours do you usually work per week…?
		a19a	What days of the week do you work?
		a20	What kind of shift or (regular) schedule you have at work?
		a15g	Do you have the right to…? Ask for a day off for family or personal reasons when necessary.
		c37c	How often…? The schedules are set by the company without possibility of change.
INTRINSIC JOB QUALITY (IJQ)	Good physical environment	c29a	How often are you exposed to extreme temperatures?
		c29c	How often are you exposed to noise?
		c29d	How often are you exposed to vibrations?
		c29e	How often are you exposed to the manipulation of harmful / toxic substances?
		c29g	How often are you exposed to chemicals in the breathing air as dust, smoke, aerosol?
		c29h	How often are you exposed to tobacco smoke?
		c30a	What is your usual work position and how often you maintain it? Standing
		c31a	In your job, how often do you handle heavy loads?
		c31b	In your job, how often you perform repetitive movements?
		c33b	Regarding illumination, how often do you have to work in uncomfortable postures?
	Good social environment	c39a	How often you can get help from colleagues if you ask for?
		c39b	How often you can get help from superiors / managers if you ask for?
		d41a	Physical violence committed by people who work with you.
		d41b	Physical violence committed by people related to your work (patients, students, inmates, etc.)
		d41c	Physical violence committed by criminals
		d41d	Have you been subject to unwanted sexual behaviours (sexual harassment and / or abuse)?
		d42a	They ignore you or treat you as with cold shoulder.
		d42b	They discredit or devalue you, personally or professionally.
		d42c	They threat you (verbal or written threats; damages to your workstation, your car or home…).
	Appropriate work intensity	c35a	How often do you need to work very fast?
		c35b	How often do you need to work to strict and tight deadlines?
		c35c	How often you have enough time to do your job?
		c36a	Pace of work determined by the automatic speed of machines or the movement of products?
		c36b	Pace of work determined by the speed of work of colleagues?
		c36c	Pace of work determined by direct demands from people related to work (customers, users…).
		c36d	Pace of work determined by the goals and/or quantity of goods and/or services to achieve?
		c36f	Pace of work determined by the direct control of your boss?
		c34d	How often do you need to hide your own emotions in the workplace?
	Skills and discretion	c37b	How often do you receive information and training from the company?
		c34c	How often does the following occur? Perform complex, complicated or difficult tasks.
		c38a	How often can you decide on the order of tasks?
		c38b	How often can you decide on the method of work?
		c38c	How often can you decide on the pace of work?
		c37f	How often do you do the following? You can apply your own ideas in your work.
		p4	What is the last year of study that you completed?
		p5	What type of tasks do you perform in your occupation?

Source: author's elaboration from ECCTS 2011 and (a) World Bank (2018).

4.3.2 Measuring job quality

Recapitulating from Chapter 2, in this study JQ is understood as a multidimensional concept, broadly defined as the extent to which the attributes of the job enable workers' and their families' well-being. Green and Mostafa measured JQ in the form of four composite indices: Earnings, Prospects, Working Time Quality (WTQ) and Intrinsic Job Quality (IJQ). The methodology used to construct these indices was adapted to the information available in the ECCTS. An exact replication was not possible given the variations in the phrasing of questions and response categories between the European and Central American surveys. A major implication is that the Prospects index had to be fully omitted from the analysis due to lack of relevant variables in the Central American dataset.

As for the other three indices, every modification required was done carefully trying to retain as much information as possible and the underlying conceptualisation given by the authors. Table 4.1 shows the ECCTS survey variables used for the construction of the three JQ indices, which are further described in the next sections.[45] Overall, the earnings index was the most faithfully captured. The WTQ index was made of five items instead of the eight used by Green and Mostafa, which may have affected its consistency. The IJQ index remained a robust measure despite the loss of data, given the higher saturation of variables used in its construction.[46]

Earnings

The earnings dimension of job quality refers to the monetary reward for work and the extent to which the job meets workers' income needs to support a standard of living for them and their families. This was measured as the common logarithm of monthly average salary in US dollars, adjusted by Purchasing Power Parity (PPP).[47]

In other JQ studies, the earnings aspect is measured as net monthly salary or 'take-home' pay that is left after deducting tax and social insurance contributions (Eurofound, 2012; Muñoz de Bustillo et al., 2011).

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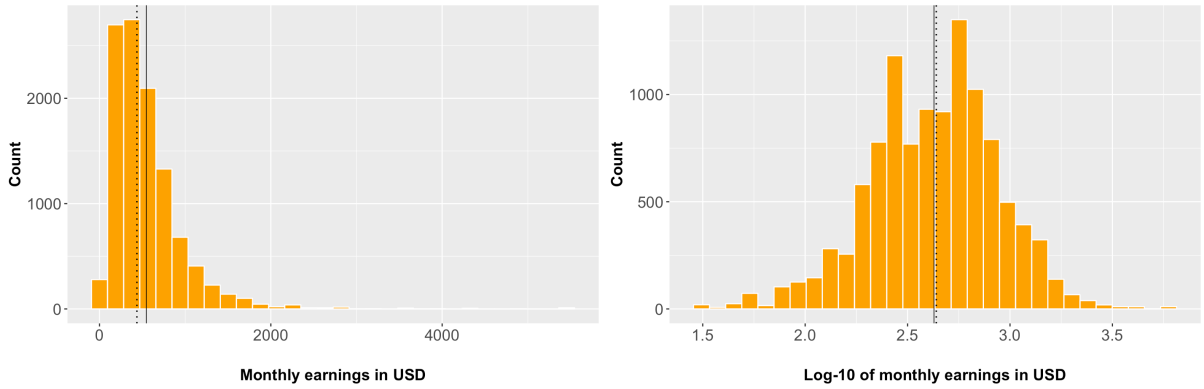
[45] I have registered all the inevitable modifications involved in the construction of the Central American version of the indices, as footnotes on the correspondent items.

[46] In fact, the Central American survey did cover some variables that can be considered all the more objective indicators of job security, but these only applied to employees and did not have a matching item in the EWCS either, thus their inclusion was discarded. The ECCTS variables mentioned referred to 'qualitative' job security, that is, concerns about the loss of job features, rather than loss of the job itself. The survey items were, specifically: threats that the company has not got the correspondent salary to pay causing instability (*d42d*); indirect layoff, that is, lower down in range or salary (*d42e*); and delayed payment or not in accordance to the agreed salary (*d42f*).

[47] Experts consider monthly earnings a more accurate indicator of JQ than hourly earnings, for it reveals the extent to which the current job meets workers' needs for income to support a standard of living, rather than job productivity. The inclusion of the PPP conversion rate allows us to account for the real value of the different currencies regardless the change in prices and the differentials in living standards across Central America. In the isthmus, only Panama and El Salvador use USD as national currency. Other currency units are the Guatemalan Quetzal (GTQ), Honduran Lempira (HNL), Nicaraguan Gold Cordoba (NIO), and Costa Rican Colon (CRC).

Figure 4.1. Central America 2011: frequency distribution of monthly earnings before and after transforming (US$, adjusted by PPP)



Source: author's elaboration from ECCTS 2011.

Although the ECCTS questionnaire does not specify whether the earnings variable refers to gross or net salary, there were additional items covering social insurance and retirement pension, thus suggesting that the enquiry about monthly pay referred to net salary. Such assumption is also supported by the fact that interviewees tend to retain information of their net salary more easily compared to gross salary.

Income data often presents outliers with unusual low or high levels of earnings that must be handled in order to avoid distorting the results. The ECCTS covers countries where income distribution is known to be very unequal, therefore the few outliers identified are believed to be genuinely extreme values, rather than potential data entry or measurement errors. Regardless, since the mean can be highly distorted by these data points, a winsorizing technique was used, replacing outliers with the nearest non-atypical data. In this case, I set the top and bottom 0.1% – a total of 16 observations – with the corresponding boundary values. This approach has the advantage of retaining more information while limiting the influence of outliers (Field, Miles, & Field, 2012).[48]

As observed in the first block of Figure 4.1, income data may not be distributed symmetrically even after removing outliers, because there is often a large proportion of the population earning less than the mean income and clustering around the lower values. To correct for non-normality, the earnings index was transformed to common logarithm (base 10), as observed in the second block of Figure 4.1. This procedure is an addition to Green and Mostafa's methodology and has the advantage of giving a more intuitive sense of the utility of money (because changes in income are often multiplicative). After log-transforming the distribution of the data we see that the mean of 2.63 (represented by the solid vertical line) becomes virtually the same as the median of 2.64 (dotted vertical line), indicating that the logged values are more normally distributed, therefore rendering more suitable for parametric statistical tests.

[48] This approach to handle income outliers was considered more conservative of the original data compared to the procedure followed in Eurofound (2012). Therein, outliers in the top and bottom quarter percentiles (0.25%) were set to missing.

Working Time Quality (WTQ)

As defined in Chapter 2, 'working time quality' (WTQ) is the extent to which job enables workers to meet a certain balance between work and non-work activities, particularly focused on the organization of working time. A WTQ index was computed as the simple average of four components: (1) work duration, (2) favourable scheduling, (3) control over working-time hours, and (4) short-term flexibility.

Work duration was measured as the number of weekly hours worked in the main paid job, a continuous variable that was categorised into the following 5 levels, normalised to a 0-100 scale: working under 20 hours (maximum score 100), 20 to 37 hours (75), 38 to 41 hours (50), 42 to 47 hours (25) and 48 hours or more (minimum score 0). The 48-hour threshold used in Eurofound (2012) was determined in accordance to the EU Working Time Directive (2003/88/EC), which in turn is based on evidence that long working weeks are detrimental to health and work life balance.[49]

The quality of *scheduling* refers to the extent to which the person works during regular office hours or business days. This component was measured as the average of two items that capture weekend and night work, each one previously normalised to a 0-100 range. Weekend work was measured through item *a19a* (see Table 4.1) and recoded into three levels: no weekend work (100), working at least one weekend day (50), and working both weekend days Saturday and Sunday (0).[50] Night work was gauged through item *a20*, and recoded into a dichotomous variable with value 100 if the individual reported never worked at night, and 0 otherwise (for instance, the person had score 0 if reported to work at least one time per month between 1.00 pm and 9.00 pm, or between 10.00 pm and 6.00 am, or if the person reported to have irregular shifts, assuming that working unstable shifts can be at least as detrimental for health as working continuous night shifts).[51]

Control over working time arrangements was estimated only for employees in a single item (*c37c*) that asks whether schedules are usually set by the employing company. Response categories were normalised to 0-100 range as it follows: always (0), many times (25), sometimes (50), rarely (75) or never (100).[52]

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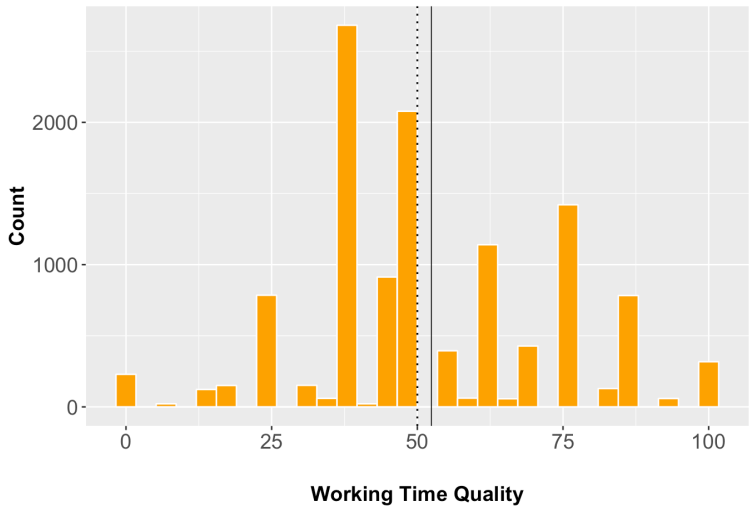
[49] This cut-off point also follows from the very first ILO Convention issued in 1919, that sets the standard of an 8-hour working day and a 48-hour working week.

[50] An alternative process would have been to dichotomise the variable into those who report to work at least one weekend day during the month (0) and those whose schedule does not include any weekend day (100), but more variability would have been lost in that case. The EWCS allowed for more continuous data in this aspect, for it asked precisely how many times a month the person works on Saturdays and, in a different question, how many times a month she works on Sundays.

[51] This variable also retrieved less information than in the EWCS, which included two separate questions: one capturing how many times a month the person works at night (between 10.00 pm and 05.00 am), and other capturing how many times a month the person normally works in the evening (between 6.00 pm and 10.00 pm).

[52] The matching question in the EWCS (*q39*) identifies four different working time arrangements, ranging from the situation where the worker has no discretion to determine the schedule, to the case where the schedule is entirely determined by the worker. Green and Mostafa combined this item with a measure of the frequency of changes to the work schedule (*q40*), scoring 0 if changes occur regularly and they are set by the company, 25 if changes do not occur regularly but they are set by the company, 50 if the worker can choose between several working schedules, 75 if the worker can adapt his working

Figure 4.2. Central America 2011: distribution of WTQ index (0-100)



Source: author's elaboration from ECCTS 2011.

Lastly, *short-term flexibility* was also measured through a single item that applied only to employees (*a15g*) referring to their ability to take a day off from work to attend personal matters. The variable was scored 100 if the answer was positive and 0 otherwise.[53] Although other models do not consider short-term flexibility to be an essential aspect of WTQ (e.g. Muñoz de Bustillo et al., 2011), here it was decided to retain Green and Mostafa's structure.

Overall, the scoring criteria adopted in the current design (and based on Eurofound's report), is that excessive working hours, unsocial shifts, and low control over the work schedule, all have undesirable effects on the well-being of workers and their families. By following the same principles in the scoring scheme of the ECCTS items, we will be able to assess if these assumptions also hold in Central America.

The composite WTQ index ranges from 0 to 100; its distribution at the aggregate level is displayed in Figure 4.2. The mean quality of working time for Central America was 52.4 (represented by the solid vertical line), with a standard deviation of 20.9. The histogram suggests a mild non-normality which is unlikely to affect the use of parametric statistical tests, therefore, ANOVA and multiple linear regressions will be used to analyse WTQ outcomes.[54]

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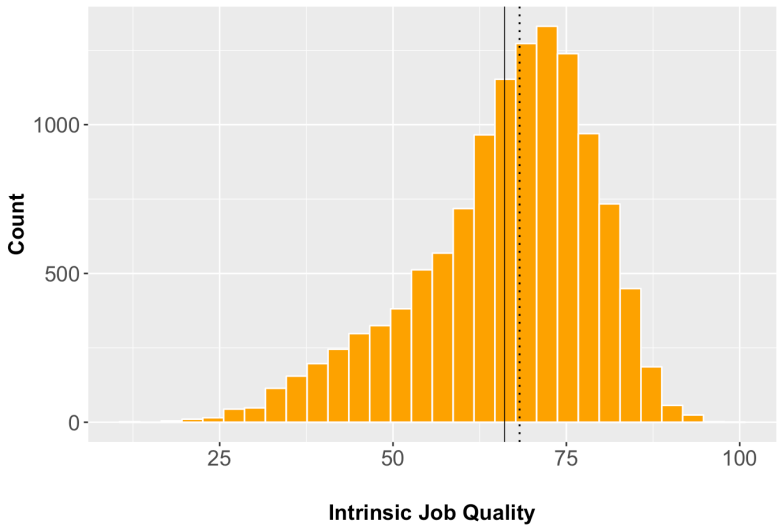
hours within certain limit, and 100 if the working hours are fixed and determined by the worker. The ECCTS did not allow to capture the discretional aspect with such level of detail.

[53] While the Central American survey asked about the right to take one entire day off and provided only two answer categories, the European survey asked about the ability to take only 'an hour or two off' during working hours, and used a 4-point response scale. This difference can make more likely that workers give a negative answer, rendering responses less nuanced.

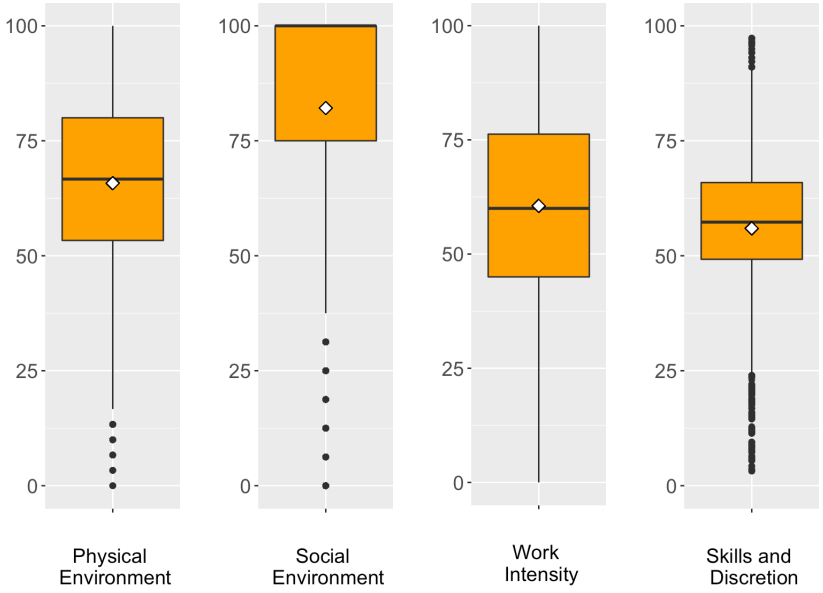
[54] Normal distribution and equal variance of the outcome variable are two of the main assumptions underlying multivariable analyses like ANOVA. Given the large size of the sample, the Central Limit Theorem allows us to assume that the WTQ index is also normally distributed in each level of the categorical independent variables used in the analysis (e.g. gender, age groups, educational level, etc.).

Figure 4.3. Central America 2011: distribution of intrinsic job quality index



Source: author's elaboration from ECCTS 2011.

Figure 4.4. Central America 2011: distribution of intrinsic job quality components



Source: author's elaboration from ECCTS 2011.

Intrinsic Job Quality (IJQ)

Following Eurofound's prototype, an IJQ index was computed as the arithmetic mean of four components that are deemed inherent characteristics of every job: (1) safety of the physical environment; (2) characteristics of the social environment; (3) appropriate work intensity, and (4) the level of skills and discretion required. Each of these components, in turn, consists of a composite indicator combining several items. No weights were imposed on any of the four JQ components, nor in the sub-components that comprise them. The aggregated IJQ index for Central America ranges from 0 to 100, with M=66.1

(solid vertical line) and a *SD* = 12.8. Its distribution, displayed in Figure 4.3, looks normal enough to be analysed through ANOVA or multiple linear regression. In turn, the distributions of the four components of IJQ are displayed in Figure 4.4. In what follows, I explain how each component was measured using the ECCTS dataset.

Quality of the physical environment

Physical environment quality has been defined as the extent to which workers can meet their need to work within a safe environment, and develop their tasks under conditions that do not pose threats to their physical health. This component of the IJQ index was measured as the simple average of ten items capturing environmental and posture-related risks, namely: exposure to extreme temperatures (c29a); noise (c29c); vibrations (c29d); manipulation of toxic substances (c29e); breathing in dust, smoke or aerosol (c29g); exposure to tobacco smoke (c29h); working in a standing position (c30a); handling of heavy loads (c31a); and performing repetitive movements (c31b). To report exposure to these hazards, respondents used a 4-point Nordic-style scale of relative time that goes from 'never', to 'less than ¼ of the time', 'between ¼ and half of the time' and 'more than half of the time to all of the time'. These response categories were recoded into a 0-1 metric, allocating the minimum score to the highest exposure and a punctuation of 1 to 'never'.[55] The final indicator 'physical environment quality' was normalised to the 0-100 range. As seen in Figure 4.4, most of the sample clusters between the scores 60 and 80, while the regional mean is located at 65.8 with *SD* = 18.7.[56]

Quality of the social environment

The social aspects of the workplace include the level of support from co-workers and superiors – on the positive side –, and the incidence of abusive behaviours – on the negative side. Thus, the 'social environment' sub-index was computed as the simple average between support and abuse, with equal weights assigned to each component. In turn, the social support component is the summary of two items capturing support from colleges (c39a) and from managers (c39b).[57] Both items were measured in a 5-

[55] Replicating Green and Mostafa's reasoning, missing or refusal answers were coded as 1, assuming lower occurrence or absence of the risk. However, if responses were missing in all 10 items, a case-wise deletion was carried-out. The way the authors treat missing observations in this component is not completely intuitive, but it was decided to imitate it for the sake of retaining as much data as possible.

[56] As it currently stands, the construction of the physical environment quality component contains two inevitable modifications from the original index used in Eurofound (2012). The first change relates to the number of items included, and the second refers to the scoring scheme given the number of answer categories. Three variables used by Green were not captured in the ECCTS: breathing in vapours such as solvents and thinners; being exposed to handling or being in skin contact with chemical products or substances; and lifting or moving people. All the other variables from the ECCTS were essentially the same as in the EWCS, with minor variations in wording. Different to the ECCTS, in the EWCS, the attributes of these variables were defined in a 7-point Nordic scale of relative time, going from 'never' to 'all of the time'. Nevertheless, we replicated the logic of coding the answers into a 0-100 metric.

[57] The support component build by Green and team included additional aspects like the presence of friends and the quality of management (getting feedback, being respected, solving conflicts, organising work, being encouraged to participate). Even though the adapted version is not as complete as originally conceived, it covers the quality of relationships at both levels of the hierarchy (co-workers and managers). Moreover, the ECCTS contained a third element on social support in which

point Likert-type scale of frequency from 'never' to 'always', hence they were normalised to the 0-1 scale before averaging them; with 0 representing the least desirable scenario (never gets support when needed), and 1 representing the best possible scenario (always gets support). The social abuse component included the incidence of unwanted sexual behaviours (d41d), silent treatment (d42d), discredit (d42b), threats (d42c), and physical violence (d41a-c).[58] I generated a dichotomous variable where value 0 indicates the report of at least one abusive event, and value 1 indicates the absence of any type of abuse. Even if most abuse-related items in the ECCTS were measured in a 5-point scale of frequency, it was decided to follow Green's dichotomisation, because it denotes a more stringent criterion towards abuse at work. The final index on quality of social environment yielded a regional mean of 82.1 and *SD* = 32.0 (Figure 4.4).[59]

Appropriate work intensity

I use the prefix 'appropriate' because work intensity can entail a positive and negative acceptation depending on the level experienced. In this research, work intensity is measured in a positive orientation, that is, as the absence of intense cognitive and emotional effort in the job.[60] The concept was measured as the arithmetic average of five indicators: speed of work (c35a); tightness of deadlines (c35b); adequacy between workload and working time (c35c); emotional conflicts[61] (c34d); and sources of pressures over the pace of work. This latter indicator, in turn, is the average of 5 items capturing pressures form the automatic speed of machines (c36a); from the work done by colleagues (c36b); from direct demands from people (c36c); from production targets (c36d); or directly from the boss (c36f). All the ECCTS

workers were asked to report how often 'social relationships are positive' (c39c), but this item was considered too subjective to be included.

58 Further codification was needed for the physical violence variable in order to adapt it to the European model. In the EWCS this indicator referred broadly to 'physical violence', whereas in the ECCTS it was separated into three different questions distinguishing who committed the act of physical violence, i.e. violence from co-workers (d41a), violence from people related with the workplace like patients, students or inmates (d41b), and violence from criminals (d41c). These three variables were collapsed into a single indicator, assigning the value zero if there was no occurrence reported at all, and value 1 if physical violence was reported in at least one of the questions. All in all, results were robust to changes in the treatment of these variables.

59 Originally, Green and Mostafa used fourteen variables from the Fifth EWCS to construct this sub-index. The 2011 ECCTS only included five of those variables, which slightly vary in terms of phrasing and answer attributes, but are feasible to be included for a potential comparative analysis between regions. Unfortunately, there were still nine questions in the EWCS about the social environment for which no possible match was found. These absent questions covered aspects of management quality, relationship with co-workers, as well as subjection to verbal abuse, bullying and sexual harassment. Moreover, even though the ECCTS did capture subjection to unwanted sexual attention (d41d) and subjection to threats and humiliating behaviour (d42c), the wording of these questions varied considerably from the European versions, limiting their comparison vis a vis (basically the Central American survey modified the time frame from 'over the last month' to 'over the last 12 months'). Furthermore, in the EWCS the variable about threats and humiliating behaviour was binary coded, whereas the ECCTS used a 5-point scale of frequency from 'never' to 'daily'. Following the most conservative approach, these variables were excluded from the social environment dimension in the EU-CA comparative analysis.

60 Felstead & Green (2017, p. 190) distinguish between 'extensive' and 'intensive' work effort. The former refers to the 'length of time spent carrying out work' – and is likely to explain why Muñoz de Bustillo et al. (2012) include an intensity component as part of their measure of working time quality. The latter, refers to the 'mix of physical, mental and emotional demands at work', and is considered part of the intrinsic job characteristics.

61 Green and Mostafa originally conceived this component as comprised of three items, but the Central American dataset only provided information for one. Two relevant indicators that remained unmeasured were the performance of tasks that conflict with personal values and handling angry clients.

items used in the work intensity index were measured with a 5-point Likert-type scale from 'always' to 'never', normalised to a 0-1 metric. The resulting index ranges from 0 to 100, where 0 represents the highest work intensity (and least desirable outcome), and 100 represents low intensive work effort. The mean was located at 60.6, and the standard deviation was 20.8 (see Figure 4.4).

Skills and discretion

As it names denotes, this component of IJQ refers to the skills demanded by the job and the opportunities to enhance them, on the one hand, and to the autonomy afforded to influence the work process, on the other. The indicator was calculated as the simple average of eight items, all normalised from 0 to 1: average educational level by occupation (p4), professional or non-professional occupational status (p5), training provided by the company (c37b), performance of complex tasks (c34c), and their autonomy to choose the order of tasks (c38a), methods of work (c38b), the pace of work (c38c), and to implement their own ideas at work (c37f). The final 'skills and discretion' sub-index was rescaled to the 0-100 range as seen in Figure 4.4, with $M = 56.0$ and $SD = 16.3$.[62]

The inclusion of educational and occupational items as proxies of the level of skills demanded can be considered somewhat redundant, but it was decided to keep both aspects to test the adequacy of the IJQ in its initial version. Ideally, according to Green (Eurofound, 2012, p. 23), the included items should be "direct indicators of prior education, training and experience required for each job" and – I would add – of whether job requirements match the worker's skill set. Unfortunately, these aspects are hardly surveyed. In a similar vein, one may argue that the training variable is more an indicator of the prospects to get better jobs than of the skills required (i.e. training helps making skills more generalizable and qualifications recognised). Hence, an improved version of this index might as well consider the exclusion of the education and occupation proxies, or the exclusion of the skill component altogether.

Handling missing data

There are three patterns of missing data in the items collected in the ECCTS that were handled differently. First, in the majority of items there were few observations missing completely at random (MCAR). According to a number of scholars (e.g. Allison, 2001; Enders, 2010; Little & Rubin, 2014), if list wise deletion were applied when aggregating the items into composite indicators (i.e. keep only complete cases), there would be a massive loss of observations that could risk the representativeness of

[62] The skills and discretion indicator built by Green and Mostafa was comprised of 15 items instead of the 8 available in the ECCTS. The variables for which not possible match was found in the Central American data, referred to the provision of on-the-job training, workers' autonomy to solve unforeseen problems, to set work targets, to choose their co-workers, and to influence over important decisions related to work, as well as their ability to learn new things, and computer use. Moreover, when Green computed the average education level by occupational group, he used 2-digit ISCO classification, that has around 20 occupational categories. Instead, in order to make the average estimate more stable, I had to use the 1-digit occupation classification, which only considers 10 occupational groups.

the sample. Therefore, the decision was made to minimise the loss of data using pairwise deletion, that is, keeping all observations that may have missing values in one or more items and computing the index as the average of the available data points. In the specific case of physical hazards, missing values were set to zero, assuming non-reporting as absence of the risk.

Second, a few of the variables used to construct each JQ index did not have values for all individuals because the question did not apply to them, that is, data missing not at random (MNAR). For instance, the items related to short-term flexibility and discretion over working time, support from manager and co-workers, abusive behaviour from people at work, and training, were only collected for employees (approximately 40% of the sample). The proportion of missing data caused by skip patterns in the questionnaire is higher in the least developed countries because they have a higher proportion of self-employed workers as observed in Table 4.2. In cases like these, Muñoz de Bustillo et al. (2011, p. 154) explain that eliminating all the observations with missing information is not the most reasonable solution because it would lead to a massive loss of data – the exclusion of more than half of the sample in our case – and to biased results. Hence, the decision was made to compute the indices for each individual using all the information available for each and assuming that the model will be incomplete for some of them. This was the logic applied when the data were missing due to logic filters in the questionnaire for self-employed workers, and it is the same logic followed in Muñoz de Bustillo et al. (2011, p. 154), who further insist that "it makes sense that the model of job quality changes for such particular dimension, since the information that is missing would be irrelevant anyway."

One of the advantages of using composite indices is that an average can be computed regardless if the data are not available for every variable. Thus, when information is missing for some of the variables making up an index, we can still use the other components to measure the concept that is intended, even if it is not as robust a measure as if all the variables were available. In that manner, the final JQ mean will yield missing if, and only if, all its components had missing values for all cases. Certainly, this implies that the JQ means analysed may not be computed over the same set of components. Nevertheless, given that the cause of the missingness is known and that lies on the employment category of respondents (employees or self-employed), we take further caution when comparing JQ averages between these two groups of workers. The procedure followed in those cases was to compute an abbreviated version of the indices, comprised only of those variables for which both employees and self-employed had data. It is worth clarifying that such abbreviated version does not make the indicators less valid for their use. This methodology allows us to keep measuring JQ for all sort of workers, constructing the indices with the maximum number of variables available and removing variables only when the pattern of missingness is directly related to the category of analysis.

Table 4.2. ECCTS 2011: proportion of self-employed respondents by country to whom logical skip patterns applied

Employment status		GTM	SLV	HND	NIC	CRI	PAN	C. America
Self-employed	N	1358	1375	1362	1163	820	916	7392
	%	(67.8)	(68.6)	(68.0)	(58.0)	(40.9)	(45.7)	(61.5)
Employee	N	644	629	642	841	1184	1087	4628
	%	(32.2)	(31.4)	(32.0)	(42.0)	(59.1)	(54.3)	(38.5)
Total	N	2002	2004	2004	2004	2004	2003	12021
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Source: author's elaboration from ECCTS 2011.

Table 4.3. ECCTS 2011: missingness proportions by job quality indices

Variable	Missing Observations	Number of Rows	Missingness %
Log Earnings	1,074	12,024	0.089
Working Time Quality	17	12,024	0.001
Intrinsic Job Quality	0	12,024	0.000
Physical Environment	1	12,024	0.000
Good Social Environment	0	12,024	0.000
Work Intensity	5	12,024	0.000
Skills and Discretion	1	12,024	0.000

Source: author's elaboration from ECCTS 2011.

Lastly, as it often occurs in survey research, most of the missing data in the earnings index are explained by respondent refusal. As seen in Table 4.3, the monthly payment item had the largest number of missing observations due to this reason, equivalent to 8.9 % of the regional sample (although it can be considered a rather low rate if compared to the 15% of missing observations in the EWCS). In this case, data are likely to be missing not at random (MNAR) because refusal often occurs amongst the people at the highest income bands.[63] Therefore, we used list wise deletion every time the earnings index was entered in a regression model as explanatory variable.[64]

[63] The ECCTS collected data on income using target and band questions, aimed at decreasing the non-response rate. First, participants were asked the exact figure of average monthly earnings received from their main job measured in national currency and taking as a reference the last three months (*g73-En referencia a su trabajo principal, cuál ha sido su ingreso promedio mensual durante los últimos 3 meses?)*. If respondents did not know the exact figure or refused to give the exact amount, they were asked to indicate an approximate range, selecting one out of eight income bands, also measured in national currency (*g73b*). Respondents were asked to answer only one of the two questions, and the information was then combined into a single continuous variable. The EWCS also used target and band questions to capture earnings, with the single difference that the number of income bands included as response categories were 20 instead of 8. For the Eurofound 2012 report, banded responses were replaced with the mean income per band obtained from the continuous variable. There is no information available on whether the Central American variable was built following the same procedure.

[64] Literature on survey research has developed sophisticate techniques to impute missing values MNAR using other items in the survey and creating an imputation algorithm of predicted values (e.g. single imputation and multiple imputation). This is a viable solution if we think of the income variable being explained largely by other observed factors, such as education, occupation, gender, age, hours of work, etc. One of the limitations of using single imputation, however, is that the random error or uncertainty element becomes an unrealistic zero, leading to overconfidence in the model and biasing the coefficients upwards (Honaker & King, 2010). Additionally, it has been argued that these techniques can be very time consuming and are not worth considering unless over 15% of the data are missing.

Data harmonisation for regional comparisons

In Chapter 6, I undertake an explorative exercise to know how Central American countries would rank among European countries, had the same data been collected. To that aim, an harmonised dataset was created pooling the 2010 EWCS and the 2011 ECCTS. The former is the survey used by Green and Mostafa to construct their set of JQ indices (Eurofound, 2012). The 2010 EWCS included nearly 200 indicators covering demographic characteristics and job-related topics such as: working time; work intensity; physical, cognitive and psychosocial features; violence, harassment and discrimination; work organisation; skills, training and career prospects; social relationships; work–life balance and financial security; job fulfilment; health and well-being. The target population was comprised of all permanent residents, aged 15 or older, that were in employment at the week preceding the consultation date – i.e. that have worked for profit at least for an hour during the reference period. It covered 34 European countries, with a total sample of 43,816 cases, equivalent to at least 1,000 cases per country. Each national representative sample was extracted following a multistage, stratified random procedure.[65]

In order to make JQ levels between Central American and European countries comparable, an extensive process of recoding and harmonisation had to be done prior to pooling both data sets. Certainly, this process involved some elements of arbitrariness to decide the matching points of the different response scales used in each survey. However, it was checked that changes in the JQ outcome variables after testing different cut-off points and combinations were generally small, confirming the robustness of the measures. When the items were strictly non-comparable between both data sources, they had to be excluded; therefore, the final regional comparison was done using somewhat abbreviated versions of Eurofound's JQ indices. A detailed description of the harmonisation procedure is included in the Appendix.[66]

Why use dashboard measures instead of one summative index?

Different to the total aggregation proposed in Muñoz de Bustillo et al. (2011) or in the IDB (2017) models (see Chapter 2), Green and Mostafa chose to use a dashboard presentation of the four main JQ scales – earnings, prospects, WTQ and IJQ. Even if both options are valid as Greco (2017) explains, in this study I decided to adopt the dashboard measures for a number of reasons to which Green and Mostafa also seem to adhere.

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[65] The dataset and questionnaire of the 5th EWCS are available for download from the UK Data Service Website at https://discover.ukdataservice.ac.uk, following online user registration.

[66] The harmonised versions of the JQ indices were only used for the comparisons between Europe and Central American countries, carried out in Chapter 6.

Firstly, while a single integrated index is easier to communicate to the general public and useful to summarise multidimensional concepts like JQ, it may lack of clear meaning for policymakers, or be prone to misled interpretations (Eurofound, 2012, p. 15). Even Muñoz de Bustillo and colleagues (2011, p. 73) recognise that using a system of indices is "closer to the reality of job quality itself, which is widely acknowledged to be multidimensional". As is plain, it is more convenient to keep a small number of dimensions, balancing between complete simplification and interpretative richness regarding the concepts that are being measured.

Secondly, total aggregation would involve the assumption that the different work-related capabilities can be traded-off, which is not strongly supported in the capabilities literature, as seen in Chapter 2.

Another reason to discard the single-index model is that it would require an arbitrary determination of which weights attach to each dimension; a procedure for which there is no academic consensus whatsoever. Moreover, even if the weights were accorded by value judgments (normative approach), international comparisons would render less practical.

Lastly, Green and Mostafa recall us that much information would be lost by averaging the four main components of JQ – three in this case – because they are not strongly correlated, that is, they evidently measure different aspects of JQ.

Internal reliability of the indices

Cronbach's alpha is normally used as an indication of the internal consistency of a composite measure. High values for alpha (e.g. $\alpha \sim 0.8$) are interpreted as a high degree of internal consistency, since the set of items that comprise the scale are strongly related with each other and capture a unified concept. Green and Mostafa also seem to follow the level of the alpha statistic and the item-rest correlation (the correlation coefficient between the item and the scale formed by all other items) when constructing their indices: in their specific case if the addition of a new potential component lowered the alpha statistic, this would be excluded from the index.

The methodology adopted in this study departs from the principle above mentioned, because the estimation of the alpha coefficient is considered less relevant to support the reliability of 'indices' than it may be for 'scales'. Streiner (2003) provides a useful explanation on this. On the one hand, he argues that *scales* are hypothetical constructs, and the observed variables that comprise them are indicators of the same underlying concept; reason why they are expected to correlate with each other, and at the same time, with the latent construct. Differently, *indices* like WTQ and IJQ are comprised of variables that are not dependent on the latent construct but rather predictors of it. Thus, despite their relationship with the latent concept, the set of items should not be necessarily correlated in theory insofar they are

measuring different job features. If they were correlated nevertheless, the strength of those associations can vary widely among samples and populations, without implying that the index is unreliable. In fact, the alpha coefficients obtained for each one of the composite indices constructed with the Central American data are somewhat lower than those obtained by Green with the European data (see Table 4.4).

Therefore, as Streiner emphasises, a low alpha coefficient should not be taken as a criterion to dismiss our JQ measures for lacking internal consistency. A more illustrative example is to think of lung cancer as predicted by various risk factors that are not inevitably related between each other, such as smoking behaviour, prior respiratory disease, dust exposure, and family history of cancer (example from Spitz et al., 2007). Although these factors are likely to yield an alpha close to zero, together they make up a useful predictive index. Furthermore, some researchers argue that indices comprised of strongly correlated items should be discarded for empirical redundancy (e.g. McGillivray, 1991, 2017).

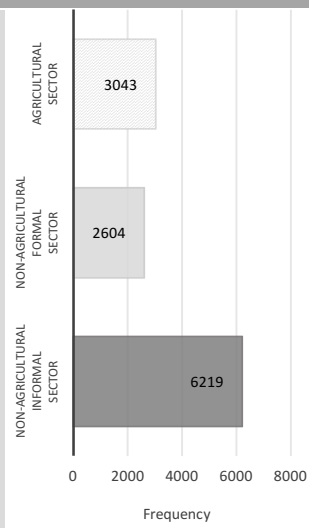
Table 4.4. Cronbachs' alpha coefficients for the original and adapted versions of the job quality indices

Index	2010 EWCS (original)	2011 ECCTS (adapted)
Job Prospects	α = .32	NA
Working Time Quality Index	α = .29	α = .06
Intrinsic Job Quality Index	α = .39	α = .27
Physical Environment	α = .84	α = .71
Social Environment	α = .28	α = .12
Work Intensity	α = .68	α = .58
Skills and Discretion	α = .80	α = .72

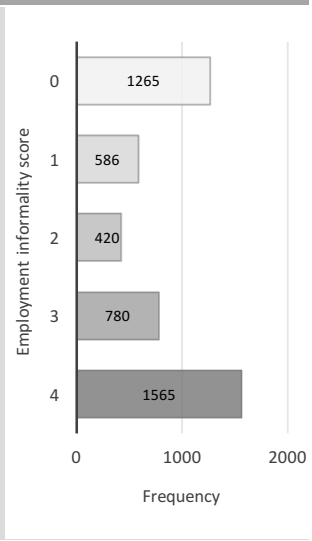
Source: author's elaboration from ECCTS 2011 and EWCS 2010.

Table 4.5. Operationalisation tree of indicators "informal sector" and "informal employment"

Industrial sector (b22)	Establishment size (b23)	Occupational category (a11)	Occupation (p5)	Score	n
Non-agricultural	Small (=<5)	Salaried worker	Non-professional	1	1469
			Professional	1	157
		Own-account	Non-professional	1	4594
			Professional	0	71
	Medium/Large (>5)	Salaried worker	Non-professional	0	1726
			Professional	0	622
		Own-account	Non-professional	0	177
			Professional	0	6
Agricultural	Small (=<5)	Salaried worker	Non-professional	-	228
			Professional	-	1
		Own-account	Non-professional	-	2387
			Professional	-	0
	Medium/Large (>5)	Salaried worker	Non-professional	-	297
			Professional	-	1
		Own-account	Non-professional	-	128
			Professional	-	0



Access to social security (p8)	Labour contract (p7)	Right to pension (a15b)	Right to paid vacations (a15a)	Score	n
Yes (=1)	Written contract (=1)	Yes (=1)	Yes (=1)	4	1565
			No (=0)	3	115
		No (=0)	Yes (=1)	3	375
			No (=0)	2	138
	Oral or without contract (=0)	Yes (=1)	Yes (=1)	3	212
			No (=0)	2	30
		No (=0)	Yes (=1)	2	99
			No (=0)	1	98
No (=0)	Written contract (=1)	Yes (=1)	Yes (=1)	3	78
			No (=0)	2	5
		No (=0)	Yes (=1)	2	117
			No (=0)	1	200
	Oral or without contract (=0)	Yes (=1)	Yes (=1)	2	32
			No (=0)	1	12
		No (=0)	Yes (=1)	1	276
			No (=0)	0	1265



Source: author's elaboration from ECCTS 2011.

Table 4.6. ECCTS 2011 distribution according to formality of sector or employment, by country

Formality indicator		GTM	SLV	HND	NIC	CRI	PAN	C. America
Workers in non-agricultural informal sector (*)	n	1027	1115	1129	872	1046	1037	6219
	%	79.6%	70.1%	77.9%	59.3%	61.9%	61.5%	70.5%
Level of formality of employment relationship	M	1.41	2.55	1.32	2.25	2.77	3.50	2.17
	SD	1.51	1.75	1.50	1.56	1.38	0.99	1.65

Note: All estimates weighted to consider sample probabilities. (*) Percentages of workers in non-agricultural informal sector were estimated over the total number of workers in the non-agricultural sector.
Source: author's elaboration from ECCTS 2011.

4.3.1 Measuring informality

I measured informality following two different acceptations commonly cited in the literature (ILO, 2013): employment in the *formal sector*, which refers to the type of production unit and is associated to a productive or dualist approach of informality; and *formal employment*, which refers to the type of job, and broadly follows the legalist approach on informality (see Chapter 2).

Formal sector was operationalised by cross-tabulating three variables: establishment size ('5 or less workers', 'more than 5 workers'), occupation ('professionals', 'non-professionals'), and occupational category ('employer or self-employed' and 'salaried worker'). Workers in the informal sector then are those in small enterprises of less than 6 workers, but excluding employers or self-employed professionals. Workers in agricultural activities are *a priori* excluded from this formal/informal sector classification.[67]

Formal employment only applied to the category of salaried workers, and it was operationalised by adding up four variables: type of labour contract ('written', 'oral or without contract'), access to social security ('yes', 'no'), entitlement to paid leave ('yes', 'no'), and entitlement to retirement benefits ('yes', 'no'). These four variables were dichotomised, with 0 representing the absence of employment benefit, and 1 representing access to that employment right. After adding up all variables, a 5-point informality scale was obtained; where 0 symbolises a completely informal employment relationship – i.e. with access to none of the employment rights – and 4 represents an 'all-inclusive' formal employment relationship.[68]

The operationalisation of both informality indicators is detailed in Table 4.5. One of the main disadvantages associated to these methodological decisions is that the information available did not allow us to test Hussmann's (2005) model of formality in the strictest sense. However, this fact merely illustrates the complexity associated with measures of working conditions adopted by policymakers, who often end up using formality proxies that have little to do with the objective conditions of the job.

In Table 4.6 it is shown that the two indicators of formality constructed have high prevalence in the Central American sample. The percentage of workers in the informal sector reached 71% at the aggregate level in 2011, a figure that is similar to the statistics published by the ILO for the same year. Measured like this, the proportion of workers in the informal sector was higher in Guatemala (80%) and

[67] As mentioned in Chapter 2, agricultural activities are often excluded from the categorisation of informal sector because of their own specificities of subsistence, which make them difficult to differentiate from informality. In operational terms, the 'agricultural sector' corresponds to tabulation category A in ISIC Rev. 4 (agriculture, hunting, forestry and fishing activities).

[68] Another operationalisation alternative would have been to use a binary indicator that distinguishes the more formal working scenario from all other possible arrangements. In that case, workers employed formally would have been defined as those employees with a written contract, with access to social security, with right to paid vacation and with right to a pension, while if any of those conditions were absent, the employment relationship would have been categorized as informal. This operationalisation appears simpler but, as the ILO expert Bolivar Pino pointed out to me, such 'all-or-nothing' conceptualisation of informality is considered too demanding in a context where situations of complete formality are rather the exception (interview conducted during fieldwork research, on September 2016, in ILO-SIALC, Panama City).

Honduras (78%). When measured in terms of the characteristics of the contractual relationship and access to rights, the mean level of formality was 2.17 and the lowest scores were found in Honduras (M=1.32) and Guatemala (M=1.41), which is also confirmed by external official sources (Obando, Rojas, & Pineda, 2009). In subsequent chapters, both indicators of formality were analysed at the aggregated country level to deal with small counts.

4.3.1 Measuring well-being

The ECCTS allowed capturing at least four different indicators of worker's well-being (Table 4.7) used as dependent variables for the correlation analyses of Chapter 7.[69]

First, *self-perceived general health* is an ordinal measure computed through item *e43* - 'How do you consider your health to be?' (Very poor, poor, fair, good or very good).[70] Because the response categories followed a 5-point Likert-type scale and it had a roughly normal distribution, ordered logistic regressions (also called proportional odds regression) were used with this variable.

Second, an indicator of *mental health* was built using items *e52a* to *e52l* that referred to the 12-Item General Health Questionnaire (GHQ), an instrument that detects psychological distress or mental illness (Goldberg & Williams, 1988). The items were coded using a bimodal scoring criterion (McDowell, 2006). The additive scale was reversed to make it a positively oriented indicator, i.e. a value of 0 represents the least healthy mental state, whereas a value of 12 represents the healthiest psychological state. This variable behaves like interval data (i.e. continuous), and although it is slightly skewed, it is tenable enough to be analysed through OLS regression techniques.[71]

Third, an indicator of *musculoskeletal illness* was constructed using composite questions *e44* and *e45*, which measure pains in the upper, medium and lower back; pains in the shoulder, elbow, wrist, knee, and ankle. The resulting scale was computed as the mean number of health problems reported by workers over the last four weeks prior to the interview, thus a negatively oriented indicator of well-being.

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[69] The survey included a fifth additional indicator of occupational accidents or work-related injuries. However, this was excluded from the analysis because according to local reports by SALTRA (Carmenate-Milián et al., 2014) these data are scarce, dispersed, not entirely reliable, and "do not correspond to the diversity and magnitude of the exposures in the different economic activities".

[70] As noted by Kaplan & Baron-Epel (2003) many studies have proved the validity of appraisal of subjective health as indicator of overall health status, which has high predictive power for future health outcomes and survival.

[71] The GHQ exists in different extensions, with 12, 20 and 30 items. In each version, half of the items are worded negatively and half positively. The negative questions collected in the ECCTS were: have you felt loss of sleep over worry (*e52b*), felt constantly under strain (*e52e*), felt that you couldn't overcome difficulties (*e52f*), felt unhappy and depressed (*e52i*), losing confidence in yourself (e52j), thinking of self as worthless (*e52k*). Whereas the positive questions were: have you been able to concentrate in what you are doing (*e52a*), felt that you play a useful part for the others (*e52c*), felt capable of making decisions (*e52d*), been able to enjoy day-to-day activities (*e52g*), been able to face problems (*e52h*), feeling reasonably happy all things considered (*e52l*).

Table 4.7. ECCTS 2011: summary responses for health items, by country and gender

Country	Self-perceived health		Mental health		Musculoskeletal illness		Other physical illness	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
GTM	3.8	0.8	9.3	2.0	1.0	1.3	1.3	1.3
SLV	3.9	0.7	8.7	2.2	2.3	2.3	1.2	1.3
HND	3.8	0.8	9.7	1.9	1.5	1.6	1.5	1.3
NIC	3.6	0.8	9.6	2.0	1.9	2.1	1.8	1.4
CRI	4.1	0.8	9.5	2.0	1.1	1.6	1.1	1.2
PAN	4.0	0.6	11.1	1.1	0.5	0.8	0.6	0.8
All respondents (N=12024)	3.8	0.8	9.5	2.0	1.4	1.7	1.3	1.3
GTM	3.8	0.8	9.4	2.0	1.0	1.3	1.3	1.4
SLV	3.9	0.7	8.6	2.2	2.4	2.4	1.1	1.2
HND	3.8	0.8	9.8	1.9	1.4	1.5	1.4	1.3
NIC	3.6	0.7	9.8	1.8	1.8	2.1	1.7	1.4
CRI	4.1	0.8	9.6	1.9	0.9	1.4	1.0	1.2
PAN	4.0	0.6	11.2	1.1	0.5	0.8	0.5	0.7
Male respondents (N=7120)	3.8	0.8	9.6	2.0	1.4	1.7	1.2	1.3
GTM	3.8	0.8	9.2	2.0	1.0	1.3	1.3	1.3
SLV	3.9	0.8	8.8	2.2	2.1	2.1	1.4	1.3
HND	3.8	0.8	9.5	2.0	1.7	1.7	1.6	1.3
NIC	3.5	0.8	9.4	2.1	1.9	2.0	2.0	1.4
CRI	4.0	0.8	9.3	2.0	1.3	1.7	1.3	1.2
PAN	4.0	0.6	11.1	1.2	0.5	0.8	0.7	0.8
Female respondents (N=4904)	3.8	0.8	9.4	2.1	1.5	1.8	1.5	1.3

Note: all estimates are weighted considering sampling probabilities.
Source: ECCTS 2011.

Other physical illness is and indicator that refers to the mean number of health problems related to respiratory, dermatological or cardiovascular disorders; headache; problems with vision or hearing (items *e46* to *e51*). Because they behave as count variables (i.e. number of symptoms in a given time period, with no negative values and often skewed to the right), these last two indicators were analysed using Poisson regression.[72]

4.3.2 Accounting for demographic and occupational variables

Based on the literature review included in Chapter 5, nine socio-demographic and occupational variables were considered; either as independent or control variables, depending on the objective addressed. All these variables were treated as categorical – which justifies the use of ANOVA as the main analysis technique.

[72] A principal component analysis (PCA) with oblique rotation was conducted on 14 items related to physical health, justifying the extraction of two different indicators, one that represents musculoskeletal kind of symptoms and other that represents all other kind of physical illness.

Table 4.8. ECCTS 2011: sample distribution by country and demographic variables

Gender (χ2=126.41, df=5, Cramer's V=0.103, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
Men	N	1269	1184	1146	1037	1184	1252	7120
	%	(63.3)	(59.1)	(57.2)	(51.7)	(59.1)	(62.5)	(59.2)
Women	N	735	820	858	967	820	752	4904
	%	(36.7)	(40.9)	(42.8)	(48.3)	(40.9)	(37.5)	(40.8)
Total	N	2004	2004	2004	2004	2004	2004	12024
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Age group (χ2=512.83, df=20, Cramer's V=0.103, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
Mean age	M	37	39	39	37	39	38	38
	SD	14.2	12.2	14.5	13.4	13.6	12.0	13.6
29 and younger	N	775	606	667	719	635	579	4136
	%	(38.7)	(30.2)	(33.3)	(35.9)	(31.7)	(28.9)	(34.4)
30-39	N	490	475	497	491	425	637	2963
	%	(24.4)	(23.7)	(24.8)	(24.5)	(21.2)	(31.8)	(24.6)
40-49	N	343	459	354	404	513	398	2376
	%	(17.1)	(22.9)	(17.7)	(20.2)	(25.6)	(19.9)	(19.8)
50-59	N	241	367	283	248	292	296	1671
	%	(12.0)	(18.3)	(14.1)	(12.4)	(14.6)	(14.8)	(13.9)
60 and older	N	156	98	204	142	139	94	878
	%	(7.8)	(4.9)	(10.2)	(7.1)	(6.9)	(4.7)	(7.3)
Total	N	2005	2005	2005	2004	2004	2004	12024
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Education level (χ2=1696.65, df=10, Cramer's V=0.266, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
Average years of schooling	M	6.2	7.8	6.8	8.3	8.7	10.8	7.5
	SD	4.4	4.3	4.1	5.0	3.8	3.3	4.5
Primary or lower (0–6 years of school)	N	1212	952	1252	805	814	261	5942
	%	(60.5)	(47.5)	(62.4)	(40.2)	(40.6)	(13.0)	(49.4)
Secondary (7–12 years of school)	N	694	863	640	814	888	1337	4828
	%	(34.6)	(43.1)	(31.9)	(40.6)	(44.3)	(66.7)	(40.2)
University	N	98	189	113	385	302	405	1254
	%	(4.9)	(9.4)	(5.6)	(19.2)	(15.1)	(20.2)	(10.4)
Total	N	2004	2004	2005	2004	2004	2003	12024
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Ethnic or national group (χ2=4464.99, df=10, Cramer's V=0.441, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
White	N	54	164	383	243	1243	629	2051
	%	(2.7)	(8.5)	(20.0)	(13.5)	(63.8)	(32.4)	(17.8)
Mestizo (or Ladino)	N	959	1676	1188	1397	380	623	6496
	%	(48.8)	(87.2)	(62.0)	(77.9)	(19.5)	(32.1)	(56.4)
Indigenous, black or other	N	954	83	344	154	324	689	2968
	%	(48.5)	(4.3)	(18.0)	(8.6)	(16.6)	(35.5)	(25.8)
Total	N	1967	1923	1915	1794	1947	1941	11515
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Foreign born	N	4	5	18	5	184	32	178
	%	(0.2)	(0.2)	(0.9)	(0.2)	(9.2)	(1.6)	(1.5)
Area (χ2=370.28, df=5, Cramer's V=0.175, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
Rural	N	811	625	902	754	705	666	4594
	%	(40.5)	(31.2)	(45.0)	(37.6)	(35.2)	(33.2)	(38.2)

Source: author's elaboration from ECCTS 2011.

Table 4.9. ECCTS 2011: sample distribution by country and work-related variables

Occupation (χ2=1309.46, df=30, Cramer's V=0.148, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
High skilled white collar (ISCO code 1, 2, 3)	N	99	105	82	245	215	259	881
	%	(5.0)	(5.3)	(4.1)	(12.3)	(10.8)	(13.2)	(7.4)
Low skilled white collar (ISCO code 4, 5)	N	674	910	897	748	892	783	4767
	%	(33.8)	(45.6)	(45.0)	(37.5)	(44.8)	(40.0)	(39.9)
High skilled blue collar (ISCO code 6, 7)	N	1113	806	812	816	626	579	5201
	%	(55.8)	(40.4)	(40.8)	(40.9)	(31.4)	(29.6)	(43.5)
Low skilled blue collar (ISCO code 8, 9)	N	107	173	201	187	258	335	1095
	%	(5.4)	(8.7)	(10.1)	(9.4)	(13.0)	(17.1)	(9.2)
Total	N	1993	1994	1992	1996	1991	1956	11944
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Industry (nine groups) (χ2=1485.84, df=40, Cramer's V=0.157, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
Agriculture, forestry and fishing	N	693	392	553	532	286	231	3075
	%	(34.6)	(19.6)	(27.6)	(26.5)	(14.3)	(11.5)	(25.6)
Industry	N	239	300	185	216	216	164	1357
	%	(11.9)	(15.0)	(9.2)	(10.8)	(10.8)	(8.2)	(11.3)
Construction	N	125	87	89	91	139	165	675
	%	(6.2)	(4.3)	(4.4)	(4.5)	(6.9)	(8.2)	(5.6)
Wholesale and retail trade, food and accommodation	N	663	823	837	653	647	657	4281
	%	(33.1)	(41.1)	(41.8)	(32.6)	(32.3)	(32.8)	(35.6)
Transport, storage and communications	N	53	101	92	53	119	172	508
	%	(2.6)	(5.0)	(4.6)	(2.6)	(5.9)	(8.6)	(4.2)
Financial, insurance, real estate and business services	N	78	99	79	75	192	163	604
	%	(3.9)	(4.9)	(3.9)	(3.7)	(9.6)	(8.1)	(5.0)
Public administration and defence	N	19	25	17	47	60	115	220
	%	(0.9)	(1.2)	(0.8)	(2.3)	(3.0)	(5.7)	(1.8)
Education, health and social work activities	N	72	79	87	226	133	168	691
	%	(3.6)	(3.9)	(4.3)	(11.3)	(6.6)	(8.4)	(5.7)
Activities of households and other services	N	63	97	65	112	212	169	612
	%	(3.1)	(4.8)	(3.2)	(5.6)	(10.6)	(8.4)	(5.1)
Total	N	2005	2003	2004	2005	2004	2004	12024
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Industry (three groups) (χ2=915.67, df=10, Cramer's V=0.195, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
Primary sector	N	693	392	553	532	286	231	3075
	%	(34.6)	(19.6)	(27.6)	(26.5)	(14.3)	(11.5)	(25.6)
Secondary sector	N	364	388	275	307	355	330	2033
	%	(18.2)	(19.4)	(13.7)	(15.3)	(17.7)	(16.5)	(16.9)
Tertiary sector	N	947	1224	1176	1166	1364	1443	6916
	%	(47.3)	(61.1)	(58.7)	(58.2)	(68.0)	(72.0)	(57.5)
Total	N	2004	2004	2004	2005	2005	2004	12024
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Establishment size (χ2=953.41, df=15, Cramer's V=0.164, p=0.000)		GTM	SLV	HND	NIC	CRI	PAN	C. America
Fewer than 5 workers	N	1545	1421	1538	1257	1157	849	8263
	%	(78.2)	(71.8)	(76.9)	(62.8)	(58.7)	(44.3)	(69.6)
5-10 workers	N	189	143	208	246	199	245	1202
	%	(9.6)	(7.2)	(10.4)	(12.3)	(10.1)	(12.8)	(10.1)
11-49 workers	N	136	203	128	243	235	430	1184
	%	(6.9)	(10.3)	(6.4)	(12.1)	(11.9)	(22.4)	(10.0)
50 or more workers	N	105	213	127	257	379	392	1225
	%	(5.3)	(10.8)	(6.3)	(12.8)	(19.2)	(20.5)	(10.3)
Total	N	1975	1980	2001	2003	1970	1916	11874
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Source: author's elaboration from ECCTS 2011.

Gender was included as a binary variable for men and women. The distribution of the ECCTS sample is shown in Table 4.8, indicative of the higher participation of men in the Central American workforce.

Age was categorised into the following 5 groups to deal with the non-linearity informed in previous studies: 29 and younger, 30-39, 40-49, 50-59, 60 and older.

Education was covered in the ECCTS as the last year of study completed, categorised into 19 levels from 'no school' to '6 years of University level education'. This variable was recoded into a 3-level categorical variable as shown in Table 4.8. According to this operationalisation, Guatemala and Honduras stand as the countries with the least educated workforce, which matches to other official statistics.

Given that it is useful to analyse the association between job quality and discriminatory attitudes toward minorities, I looked onto the *ethnicity* variable. The ECCTS collected such variable in terms of self-identification, distinguishing between 'indigenous', 'mestizo', 'white', 'black', 'mulatto', 'Chinese', 'ladino' or 'other'. These ethnic groups were recoded into three major categories. The first category clusters those workers who identified themselves as from a 'white' background. Even if this category represented a significant proportion in Costa Rica and Panama only, it was decided to analyse it as a separate category because the more advantaged social treatment that the white population receive is similar across the isthmus (Hopenhayn et al., 2006). The second category groups 'mestizo' with 'ladinos'; while the former are workers who identify themselves with mixed European and native ancestry, the latter is simply the Guatemalan expression of this Hispanicised[73] native people. A third category brings together all ethnic minorities including 'indigenous, blacks and mulattos'. Specifically, the term 'indigenous' refers to native people from Central America and their descendants; people that identify themselves often retain indigenous cultural expressions, such as the language. In Guatemala and Panama, indigenous people are often placed in the lower levels of the social hierarchy, despite representing a large proportion of the population.[74]

Migration status is also a variable that can capture discrimination against minorities, thus the question about country of birth will also be considered, simply in dichotomous terms ('international migrant', 'non-migrant').[75]

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[73] 'Hispanicised' refers to native people brought under Hispanic cultural or blood influence.

[74] Katz (2011, p. 75) specifies that the categorisation of the nominal variable ethnicity will usually depend on the study population. Commonly, it will be more adequate to create categories only for the larger ethnic groups and group the other cases under a category "other", so that all statistical information derived is relevant to the specific population investigated. That said, if different ethnicities are classified in the same group, it must be checked that those ethnicities relate to the outcome in similar ways.

[75] In a strict sense, population censuses identify international migrants by cross-tabulating two criterions: country of birth and current country of residence. However, since being a resident in the country was one of the eligibility criterions of the ECCTS sample, it can be assumed that those who declared being born in a different country are international migrants rather than commuters.

Table 4.8 also shows the distribution of the sample according to the main ethnic groups and migration status, by country, representing closely the heterogeneous ethnic and migrant structure of the Central American society that has been informed in official sources. As for migration, Costa Rica was the only country from where the group of foreign born workers was large enough for statistical analysis (over 100 observations, mostly from Nicaragua), therefore the exploration of JQ gaps will be focused on this specific group.

Zone was used as a binary variable for workers who reside in urban and rural areas. The proportion of workers from rural zones as collected in the ECCTS, by country, is observed in Table 4.8.

Occupation was captured in the ECCTS dataset following the 2008 2-digit International Standard Classification of Occupations (ISCO). I recoded it into 4 occupational groups following the criterion of other sources (e.g. Eurofound, 2010), namely: 'high skilled white collar' workers (managers, technicians and associated professionals), 'low skilled white collar' (clerical support, service, shop and market sales workers), 'high skilled blue collar' (skilled agricultural, forestry and fishery workers, craft and related trade workers), and 'low skilled blue collar' (plant and machine operators, assemblers and elementary occupations). The resulting distribution by country can be seen in Table 4.9.

Industry was originally captured in the ECCTS based on the United Nations' International Standard Industrial Classification of all Economic Activities (ISIC Rev. 4, 2008). To facilitate interpretation and avoid problems of small counts, the 21 ISIC sectors were condensed into 9 larger categories as shown in Table 4.9. However, even using this condensed categorisation, the number of observations within some sectors remained under 100 observations when breaking down the data by country, making the estimates rather unstable. For that reason, most of the sector comparisons were conducted at the aggregate level.[76] The analysis per country, instead, followed the traditional three-sector classification developed by Fisher (1939), which distinguishes between primary activities (extraction of raw materials, that is, agriculture, hunting, forestry, and fishing), secondary activities (manufacturing, construction, public utilities like electricity, gas and water), and tertiary activities (services, including wholesale and retail trade, restaurants and hotels; transport, storage, and communications; financing, insurance, real estate, and business services; community, social, and personal services).[77]

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[76] The survey did not directly collect information on the type of ownership of the company or organisation, making impossible to differentiate the public and private sectors with precision. However, the following analysis was conducted following the criterion of other studies that define the public sector as ISIC code O, which is "Public Administration and defence, compulsory social security". The sectors of education and health, were also analysed with attention in this respect, since in many Latin American countries, part of these sectors is of public ownership. The remaining ISIC categories were identified as private.

[77] Specifically, the primary sector corresponds to tabulation category A from ISIC-Rev. 4; the secondary sector includes tabulation categories B to F; and the tertiary sector includes tabulation categories G to U. The same recodification has been employed in international studies such as the 2013 World Development Report on Jobs (World Bank, 2012).

Establishment size refers to the number of workers; which was re-coded into 4 categories as shown inTable 4.9: fewer than 5 workers, 5-10 workers, 11-49 workers, and 50 or more workers. The figures are indicative of the high prevalence of small-size firms with fewer than 5 workers (own-account workers included), especially in Guatemala, Honduras and El Salvador, where micro enterprises represent more than 70% of all establishments.

Lastly, *country* is the main categorical variable used in the subsequent analyses distinguishing between Panama, Costa Rica, Guatemala, Nicaragua, Honduras, El Salvador and Guatemala.

4.3.3 Quantitative tools of data analysis

In Chapters 5, 6 and 7, different quantitative tools were used to analyse the secondary survey data, including univariate (means and standard deviations of JQ for each group of workers), bivariate (Pearson correlation coefficients between JQ components), and multivariable techniques (multi-way ANOVAs and regressions).

Multivariable data analysis was prioritised to account for the effects of the largest number of variables over JQ outcomes simultaneously, acknowledging the limitations of cross-sectional data to establish causal explanations of these regularities (Goldthorpe, 2016; Katz, 2011). As demonstrated by Katz (2011, p. 1), multivariable analysis becomes the most suitable statistical tool "for determining the relative contributions of different causes to a single event or outcome". It is an adequate technique to deal with confounders and suppressers of the observed relationship between the variables of interest, allowing to easily deal with interactions terms (in this case, between the country and the predictor of interest over JQ outcomes).

The type of multivariable analysis applied was determined in accordance to the measurement level of predictors and outcome variables involved. Multiple linear regressions and ANOVA work with the same underlying assumptions, and yield the same results if the models are set in similar ways (Katz, 2011, p. 32). However, in the first stage of this research, ANOVA techniques were prioritised over regressions. This decision was made essentially because all the predictors considered were categorical (e.g. gender, age groups, education, occupation, etc.), and including many categorical predictors in multiple regression can be cumbersome, in the sense that it requires creating dichotomous variables for each category of the predictors. Another reason to choose ANOVA is that we are interested to know the size of the effect of each factor as a whole, which is harder to calculate in multiple linear regressions when all the predictors are categorical.

Table 4.10. Semi-structured interviews sample, by sector and country

Country	Sector				Total
	Government	Employers	Trade Unions	NGOs/Academia	
Guatemala	✓✓	✓	✓✓✓	✓✓✓✓	10
El Salvador	✓	✓	✓✓	✓✓	6
Honduras	✓✓	✓	✓	✓	5
Nicaragua	-	✓	✓✓	✓✓✓✓	7
Costa Rica	✓✓✓	✓	✓✓	✓✓✓✓✓✓	12
Panama	✓	✓	✓✓✓	✓✓✓✓✓	10
Total	9	6	13	21	50

Source: author's elaboration.

Special attention was placed on the size of the effects over their significance and in some occasions the strength of the associations was illustrated in bar graphs to ease interpretation. Similarly, country patterns were represented in the form of line graphs and box-and-whisker plots. Whenever possible, error bars were included in the graphs, assuming there will always be an error attached to the inferences made from our sample (Goldthorpe, 2016). All statistical analyses were performed using the software R Studio.

4.4 Qualitative analysis of primary interview data

In the second stage of the research, a total of 50 interviews – of 1 hour average length of duration – were conducted between September and December 2016, in the capital cities of Panama, Costa Rica, Nicaragua, El Salvador, Guatemala and Honduras. The sample covered experts and key informants from the government sector, employers, trade union leaders, as well as representatives from NGO and academia (see Appendix for detailed list of interviews by country and sector).

The selection of interviewees was done through a convenience sampling method, nonetheless ensuring the selection of at least one representative per sector in each country. As observed in Table 4.10, this method was highly successful: Nicaragua was the only country where access to government officials was not granted, despite several attempts of reaching out and recurring to ILO's institutional support.

Recognising the limitations of generalizability of the results, the decision to conduct interviews was taken *ex post* and it was driven by two main reasons. First, that a basic documentary analysis about the countries' institutional background did not allow to infer any conclusion regarding the country differences in JQ, suggesting that there were some hidden factors beyond 'the paper' that needed to be explored *in situ* (see Chapter 6). The second reason was the need to uncover the local public discourse about the aspects that are deemed essential of a good job, so as to interpret the results of the statistical analysis in context (see Chapter 8). In this sense, the interviews were aimed at grasping the dialogues and practices of those that have a major say in policymaking, thus providing a more accurate account about how the concept of JQ has permeated in a top-down way.

4.4.1 Qualitative methods of data analysis

The interviews were processed using the software ATLAS.ti for computer assisted qualitative data analysis. Only 20 interviews that were considered richest in content were transcribed before coding the data, while the remaining 30 interviews were uploaded to the software in audio format and directly coded, with support of field notes.

Transcripts and audio recordings were analysed identifying two substantial themes: first, those institutional macro-level factors related to JQ ('labour regulation and enforcement', 'workplace inspection', 'trade unionism', etc.); and second, those manifest and latent dimensions of what constitute a 'good job' according to local actors ('wages', 'job security', 'maternal and child care', 'non-discrimination', etc.).

Verbatim transcription and coding of all interview files was not considered essential for the purposes of this mixed-method investigation, since the interviews were aimed at describing the actors' perspectives rather than to building theory from the interviewees' discourses, or as put by Halcomb & Davidson (2006), "to provide a sense of confirmation of the data through the enhancement of validity and confidence in the findings".

In turn, when used alongside field notes, the advantages of direct coding include: lower time and money costs; more accuracy and reduction of potential sources of error introduced by transcribers (closer to the original source); and retention of contextual non-verbal features that can be relevant for the subsequent interpretation of the data (Halcomb & Davidson, 2006; Markle, West, & Rich, 2011; Neal et al., 2015; Tessier, 2012).

4.5 Ethical considerations

Since the research project involved gathering information from human participants in both stages, there were some ethical implications to address. On the one hand, the ECCTS survey protocol complied with the guidelines of the Ethics Committees of the University of Texas and the *Universitat Pompeu Fabra*. On the other, the data collected through the interviews did not involve the participation of any vulnerable group; furthermore, it did not require asking any intimate or sensitive questions, thus minimising any possible hazards to the participants. Approval of this second stage of data collection was granted by the Ethics Committee of the Department of Sociology at Cambridge University. In both, the survey and interview process, each respondent was informed about the objectives of the study and asked for agreement to participate.

5 Which workers have the 'good jobs'?

An advantage of the JQ indices here assessed is that they can be computed at the individual level. By comparing the quality of jobs among individuals with different socio-demographic and occupational characteristics, we expect to validate Eurofound's JQ indices in terms of the feasibility of the results they produce in other settings. There are some groups of workers in objectively better (or worst) job situations that we anticipate to find. In fact, the literature demonstrates that differences in JQ are broader *within* countries rather than *between* them (Smith et al. 2008, in Muñoz de Bustillo et al., 2011). Furthermore, as Sehnbruch rightfully notes (2004, p. 13), given that we are following the principles of the CA, we must ponder "those personal and social factors that influence the individual's capability to convert the characteristics of a particular job into a set of achievable functionings." Unveiling these asymmetries also becomes a relevant task considering that policy design is generally aimed at improving the situation of the most disadvantaged groups, rather than JQ at the aggregate level.

The identification of inequalities in terms of job quality has been done more extensively in developed contexts (e.g. Eurofound, 2012; OECD, 2015); however, the topic remains mostly unexplored in developing countries. In particular, no similar JQ measures have ever been computed for Central America before the ECCTS was implemented. Hence, describing how JQ is distributed within this regional sample already represents a contribution per se. However, it is worth stressing on the idea that, beyond merely describing the Central American scenario, this chapter is aimed at assessing if the multidimensional JQ measures are sensible enough as to grasp individual-level gaps in Central America.

Having noted that the state of knowledge about JQ inequalities is meagre in Central America, the evidence to assess our findings derives from prior survey research conducted in Argentina (República de Argentina, 2009), Chile (Amuedo-Dorantes, 2004; Vallebuona, 2011) and Uruguay (Martinez & Crego, 2013). We contrast our results also with the information provided by non-governmental organisations (e.g. UN-ECLAC, ILO, The World Bank). If there is no background information contextualised in Latin America, then we draw on the evidence of studies based on the EWCS (Eurofound, 2012, 2013; Muñoz de Bustillo et al., 2011), or general academic research that touches upon any dimension included in the concept of JQ (Landsbergis et al., 2014). This literature generally

declares that the situation of young, female and least educated workers is often more disadvantaged in some dimensions of the jobs they perform; as is the case of ethnic minorities, workers in non-professional occupations or small establishments. These are, therefore, the kind of broad patterns we would expect to find within our data provided the indices are a valid measure of JQ.

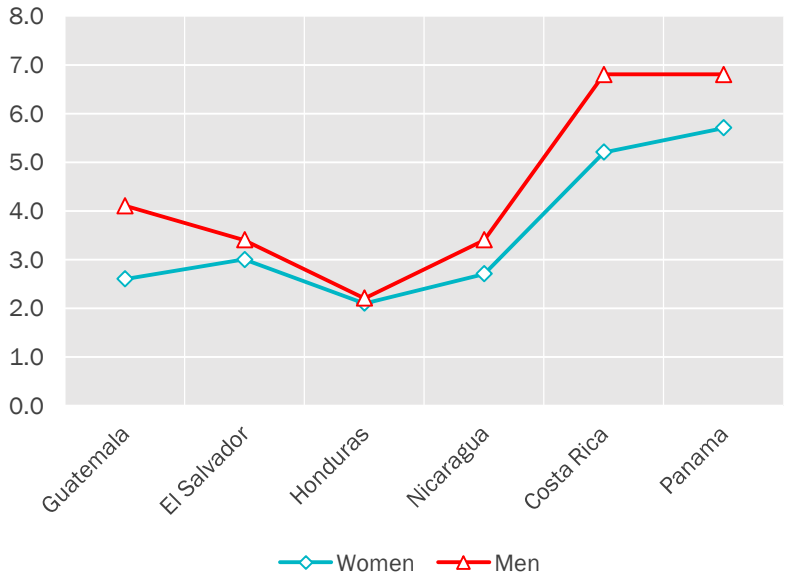
The chapter is organised as follows: first, I analyse whether in Central American countries the dimensions of earnings, WTQ and IJQ are associated with sociodemographic factors like gender, age, education, ethnicity and urban/rural area of residence of workers. Second, I go on to analysing the effect of job-related factors, namely occupation, industrial sector and size of the work establishment. In the third section, all individual factors are put in comparative perspective to determine which of them contribute the most to explain job quality variability. The country-factor was incorporated throughout this analysis in the form of interaction terms, bearing in mind that the key determinants of JQ gaps may vary from country to country (Muñoz de Bustillo et al., 2011, p. 67). Lastly, I assess the differences in JQ between formal and informal work arrangements, contributing to disentangle this complex concept of 'informality' that has been used for a long time – perhaps inaccurately – as a proxy of bad quality jobs. Throughout the chapter, I dialogue with the background evidence to assess whether our results are plausible. For most of the analytical categories used in this chapter – gender, age, occupation, etc. – the literature on job quality and working conditions provides certain standard patterns against which we can compare our results and determine their validity. When such body of evidence is limited in developing countries, we resort to the theory of other settings as a benchmark.

5.1 Association between job quality and socio-demographic characteristics

5.1.1 Gender gaps in job quality

In the literature on working conditions, *gender* is often depicted as a factor associated to JQ. For instance, female workers are often more represented among low paid and insecure jobs, as well as having markedly fewer decision opportunities compared to men. In turn, men work longer hours per week, more frequently during non-standard shifts or weekends, and in more hazardous physical environments. Moreover, previous research points out that women are more exposed to harassment at work due to their more frequent contact with customers and patients (Eurofound, 2013).

Figure 5.1. Average income of employed population by gender and country, circa 2010 (%)



Note: Guatemala figures correspond to 2006, and Nicaragua to 2009.
Source: author's elaboration from CEPALSTAT (2018), based on household surveys.

Figure 5.2 plots the resulting mean scores of earnings, WTQ and IJQ by gender and country, with the corresponding standard errors. Therein is confirmed that men, who predominate in the Central American labour force, had significantly higher earnings than women in most countries. When measured in US dollars at the aggregate level, women's mean monthly income was 12% lower than men's (*M*=504 and *SD*=436, versus *M*=575 and *SD*=441 in US$). This pay gap resulted much narrower than the 24% found in Europe around the same year (Eurofound, 2012).

The analyses of variance showed that, in Central America, the gender factor had a significant main effect on pay equivalent to *partial* η^2 = .011, which increased up to partial η^2 = .03 after controlling for age, occupation and country (Table 5.1).

The pattern was not constant across countries, though: the gender pay gap disappeared in Honduras and Nicaragua, while widened in Costa Rica. By looking at how parallel lines are, the graphs in Figure 5.2 immediately tell us whether an interaction between country and gender may exist or not. A more rigorous analysis to judge whether we can be confident over those country differences is to incorporate an interaction term between country and gender in the multi-way ANOVA as seen in Table 5.1 under 'Model 3'. Therein it is conformed that there was a significant interaction altering the main effect observed previously.[78] Although, the absence of a gender pay gap in Nicaragua and Honduras seems at

[78] In this and the following sections, the analysis of variances were built up gradually. First, I did a one-way ANOVA with gender for the whole of Central America. Next, I did a multi-way ANOVA including other controls like age, occupation and

odds with global trends, this result is partly supported by other official sources. For instance, according to data from 2010 household surveys tabulated by UN-ECLAC, employed men and women in Honduras were paid the same on average (Figure 5.1). The figures are not expected to match completely because ECLAC's tabulations include salaried workers only, as well as population aged 15 and over.

In accordance to the literature, our results also showed that women across all countries enjoyed better WTQ than men (M=54, SD=21.7; versus M=51.3, SD=20.4). At the aggregate level, the main effect of gender on WTQ was small (*partial* η^2 = .004, $p < .001$), and increased slightly after controlling for country and other factors. Although the graphs suggest that the gender difference in WTQ is smaller for respondents in Honduras, the ANOVA did not yield a significant interaction term. Women's better WTQ was basically explained by a lower extensive work effort (weekly hours of work), better scheduling and, in a couple of cases, higher flexibility for short-term arrangements during working time, all aspects that accommodate better to their higher domestic demands, as the literature suggests (Atal, Ñopo, & Winder, 2009; Eurofound, 2013). Yet, women's better score in the WTQ dimension may not translate into better well-being, because their monthly pay is correspondingly penalised, while their domestic burden (child or elderly care, studying or volunteering) does not decrease (Muñoz de Bustillo et al., 2011, p. 237). Further examination of the data showed that Central American women spend 20 hours a week, on average, on household activities, compared with the 12 hours spent by men.

Women also reported significantly better IJQ than men (M=67.9, SD=12.7; versus M=64.9, SD=12.7), a gap that was constant across countries. For a more detailed inspection, Figure 5.3 plots the mean scores for men and women in each of the four IJQ components, revealing that women's higher score was largely due to their better physical environment, as informed by other studies. However, the expected disadvantage in the social environment of their jobs was not perceived in Central America. Overall, the gender effect on IJQ decreased considerably in magnitude from *partial* η^2 = .013 ($p < .001$) to *partial* η^2 = .004 ($p < .001$) after controlling for age, occupation and country; possibly due to the confounding effect of an occupational structure that is still highly attached to gender roles in Central American countries.

All in all, our JQ measures provide a panorama where female workers in Central America perform jobs significantly worse than those of men in terms of pay, but better in terms of WTQ and physical environment. Women's higher quality of working time, however, may be concealing their workload disadvantages outside paid work.

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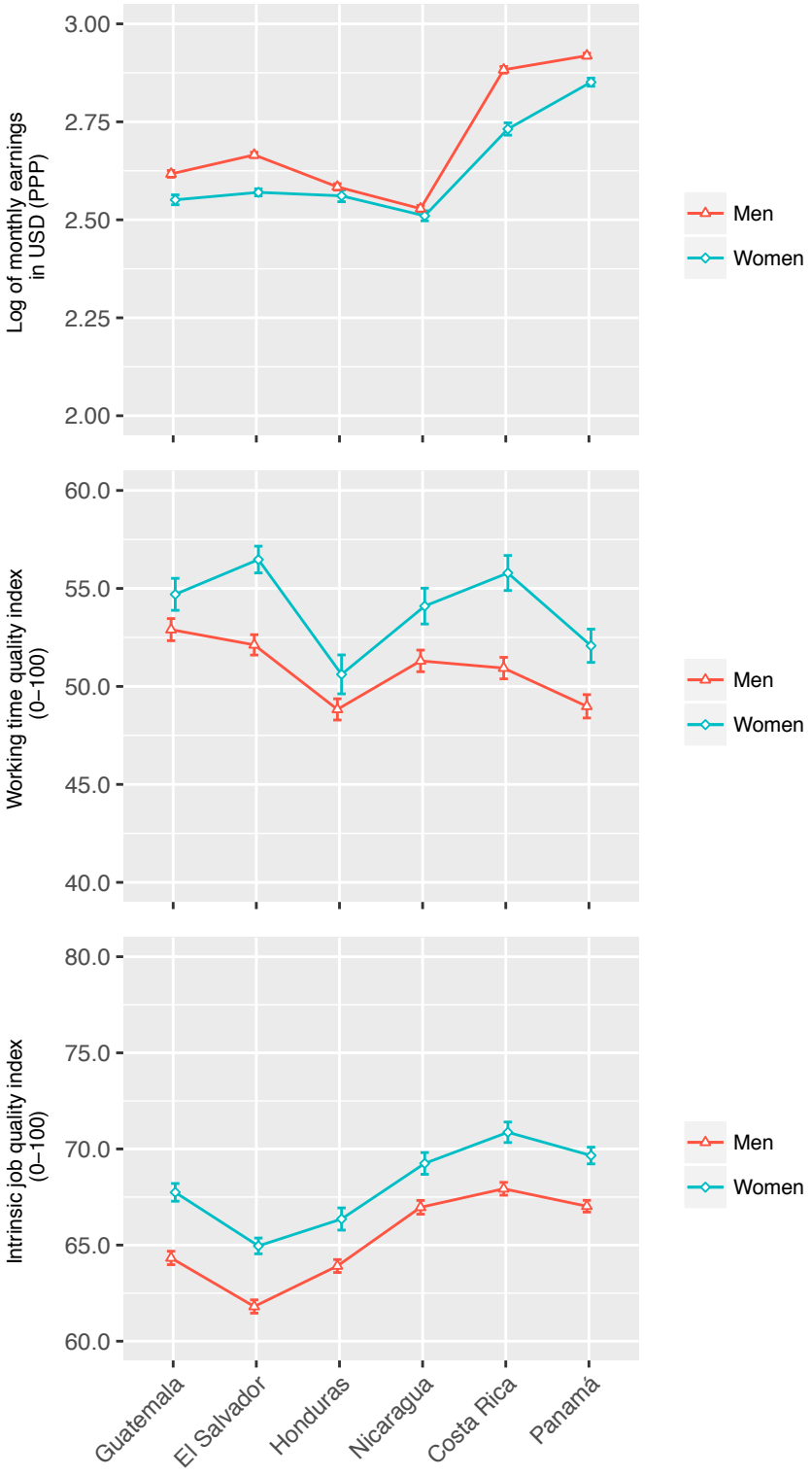
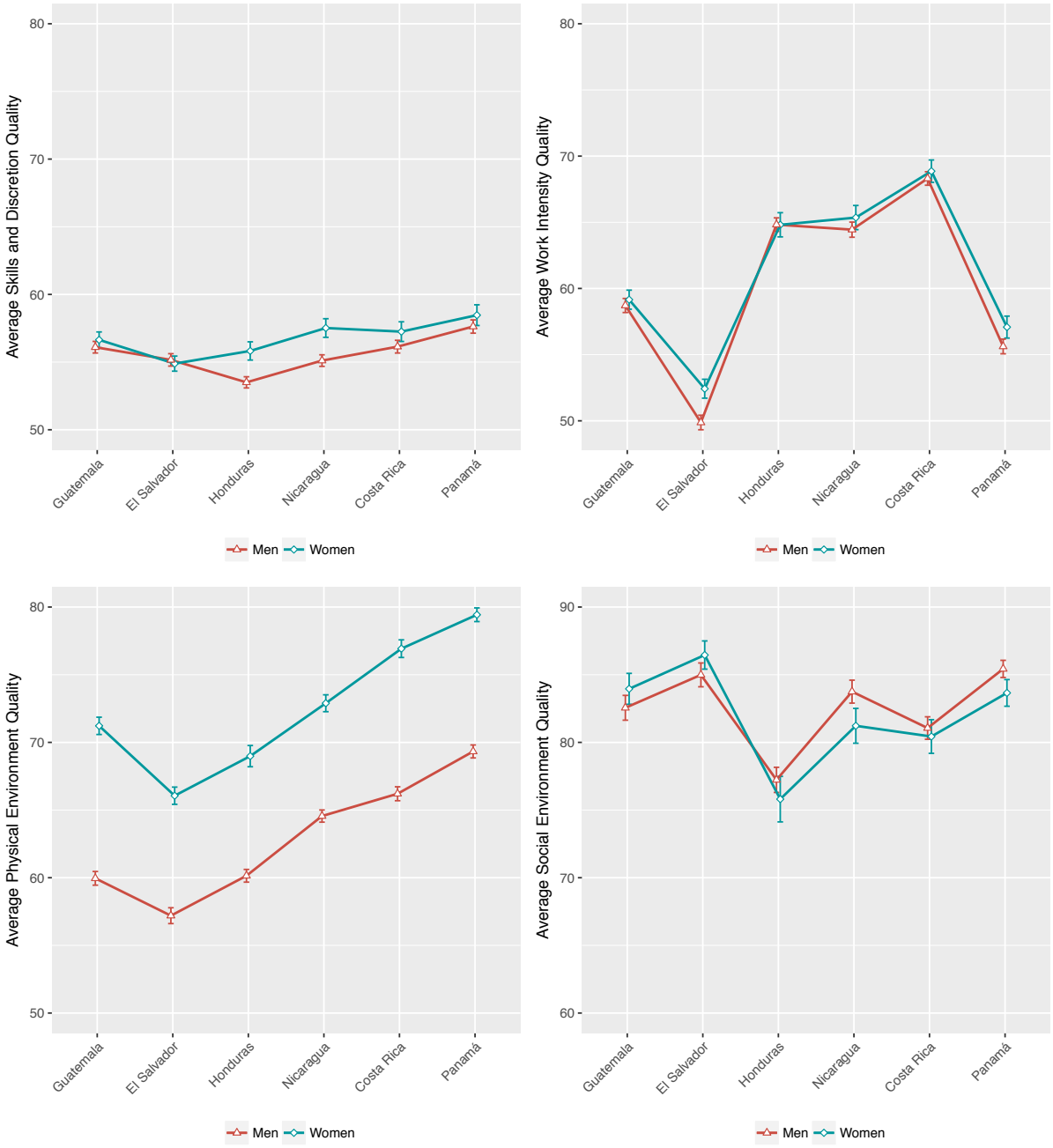
country. Third, I added an interaction term between country and the predictor of interest. The line graphs should be read as complementary information, because if there is a significant interaction with country, it may not just be the strength of the association that changes but the slopes too, and such a pattern is hidden in the *partial eta-square* statistic.

Figure 5.2. Average monthly earnings, IJQ and WTQ, by gender and country



Source: author's elaboration from ECCTS 2011.

Figure 5.3. Mean scores of IJQ sub-components by country and gender



Source: author's elaboration from ECCTS 2011.

Table 5.1. ANOVA results for earnings, WTQ and IJQ, with gender as main predictor

Outcome = EARNINGS							
	Source of variation	*partial η^2*	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	gender	0.011	12	1	125.6	0.000	***
	residuals		1053	10948			
Model 2	gender	0.030	26	1	333.4	0.000	***
	age group	0.010	8	4	26.3	0.000	***
	occupation	0.066	60	3	256.9	0.000	***
	country	0.112	106	5	273.5	0.000	***
	residuals		843	10844			
Model 3	gender	0.009	8	1	102.0	0.000	***
	age group	0.010	8	4	26.6	0.000	***
	occupation	0.065	58	3	251.3	0.000	***
	country	0.078	71	5	183.3	0.000	***
	gender*country	0.003	3	5	6.6	0.000	***
	residuals		841	10839			
Outcome = WTQ							
	Source of variation	*partial η^2*	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	gender	0.004	21506	1	49.2	0.000	***
	residuals		5249369	12005			
Model 2	gender	0.007	34570	1	80.4	0.000	***
	age group	0.001	5786	4	3.4	0.009	**
	occupation	0.013	66782	3	51.8	0.000	***
	country	0.006	30575	5	14.2	0.000	***
	residuals		5115794	11897			
Model 3	gender	0.001	6131	1	14.3	0.000	***
	age group	0.001	5810	4	3.4	0.009	**
	occupation	0.013	66332	3	51.4	0.000	***
	country	0.003	16722	5	7.8	0.000	***
	gender*country	0.001	3472	5	1.6	0.152	
	residuals		5112322	11892			
Outcome = IJQ							
	Source of variation	*partial η^2*	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	gender	0.013	25490	1	157.6	0.000	***
	residuals		1944256	12022			
Model 2	gender	0.004	6640	1	43.6	0.000	***
	age group	0.009	16052	4	26.3	0.000	***
	occupation	0.031	57835	3	126.5	0.000	***
	country	0.021	38809	5	50.9	0.000	***
	residuals		1815375	11913			
Model 3	gender	0.003	5180	1	34.0	0.000	***
	age group	0.009	16508	4	27.1	0.000	***
	occupation	0.032	59021	3	129.2	0.000	***
	country	0.015	27061	5	35.5	0.000	***
	gender*country	0.001	1974	5	2.6	0.024	*
	residuals		1813401	11908			

*p < .05; **p < .01; ***p < .001. All analyses were carried out using Type III Tests.
Source: author's elaboration from ECCTS 2011.

5.1.2 Age differences in job quality

Younger workers are generally linked with worst jobs in regards to earnings, working hours, and also appear worse-off in most of 'intrinsic aspects' of work (skills and discretion, intensity, social and physical environment).

Figure 5.4 shows the mean scores for earnings, WTQ and IJQ by age groups and country. Generally, the middle-age group had the highest monthly income in US dollars (M=597, SD=489 US$), whereas the oldest group was the worst paid (M=450, SD=423 US$). This parabolic relationship between age and income has been reported in previous research and resulted similar across our six countries of study. Assuming this was a maturation effect, economists would probably argue that the inverted u-shape relationship is caused by a decreasing rate in productivity. It may also be the case that the observed pattern is a birth cohort effect, that is, that mid-age generations are better paid because they are more educated than younger generations at the same point in time, or because the oldest group does not have up-to-date skills for the use of technologies as the mid-age group. A possible cohort effect is worth considering regarding other dimensions of JQ as well. Since we are looking at cross-sectional data, both the maturation and cohort effect may confound.[79] That being said, the disadvantaged income situation of elder workers in Central America differs slightly from the pattern found in Europe; where elder's pay is rather similar to that of mid-age workers (Eurofound, 2012; Muñoz de Bustillo et al., 2011). A possible explanation to such regional difference is that in Central America, workers' experience is less valued and more easily replaceable compared to other continents that are in more advanced stages of the demographic transition.

The aggregate age effect on pay was equivalent to *partial* η^2 =.014, and remained of similar size once controlling for gender, occupation and country (Table 5.2). The lines in Figure 5.4 are almost parallel which explains the absence of a significant interaction.

As a mirror effect, the middle-age group appeared with the worst WTQ at the aggregate level (M=51.8, SD=20.9). However, when the pattern is broken down by country in Figure 5.4 it is observed that in most cases the differences between age groups were not significant, which parallels the results obtained in Muñoz de Bustillo et al. (2011). Panama represents the only case in which WTQ increases along with age in a clearer manner. Therein, younger groups work significantly longer hours, during more antisocial shifts, and with less flexibility for short-time arrangements compared to older workers. The Panamanian pattern assimilates more to the evidence presented in other European reports (Eurofound,

[79] A maturation or ageing effect on pay refers to the way a worker's return in pay changes as the same person gets older. A cohort effect refers to specific characteristics attributable to young workers as compared to older workers.

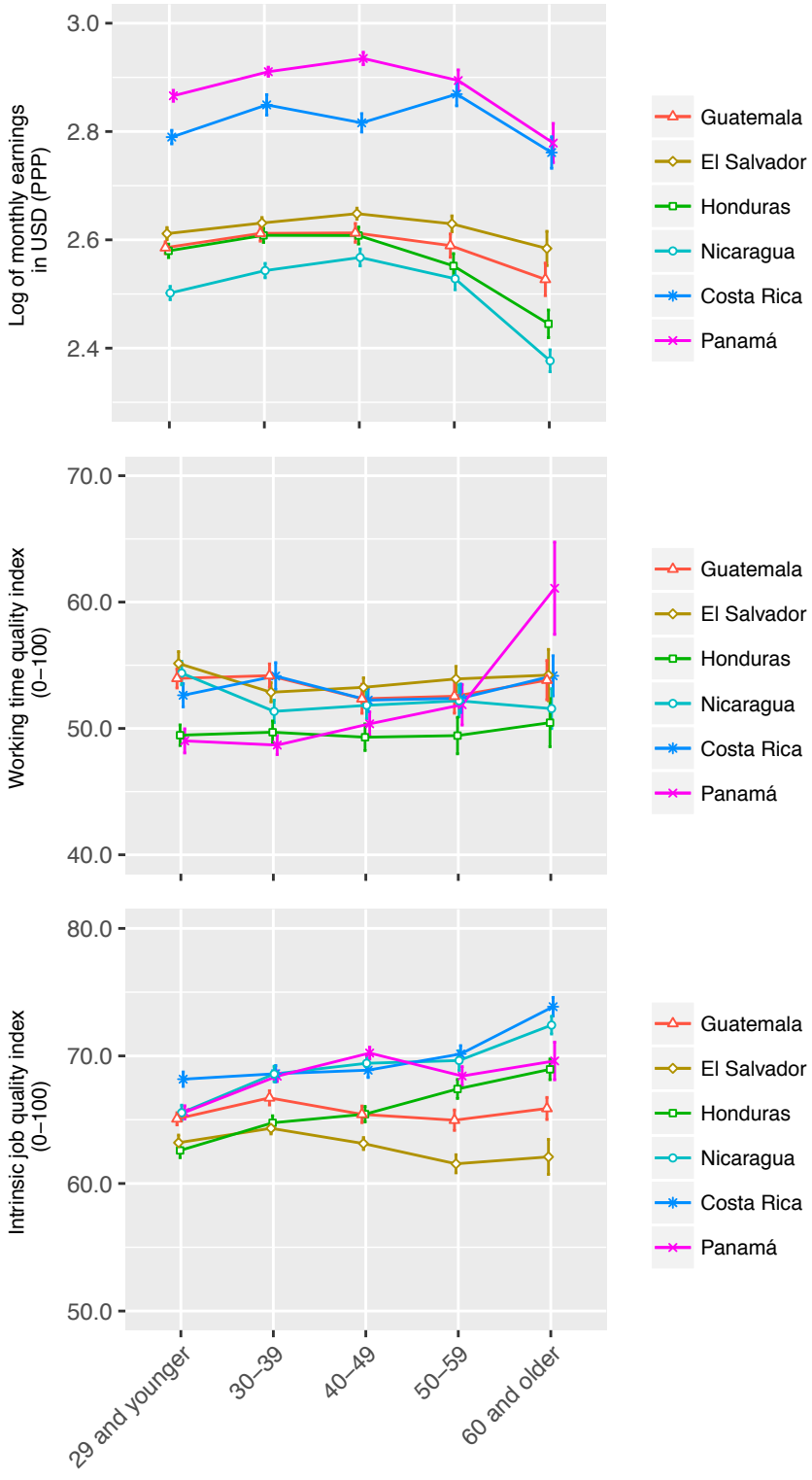
2012).[80] The overall effect of age on WTQ only become significant at the 99% level after accounting for other factors such as gender and occupation, having remained small nonetheless (*partial* η^2 =.001, p < .01).

At the continent level, there are more age disparities in terms of IJQ, where the youngest workers scored nearly 5 points worse than the oldest (*M*=64.8, *SD*=13.2; versus *M*=68.3, *SD*=11.8). The main effect of age on IJQ was significant if small, with a magnitude of *partial* η^2 =.006, p < .001. This positive relationship between age and IJQ, roughly reproduces the results found in previous European surveys. The more detailed picture in Figure 5.5 suggests that the lower IJQ of younger workers was mainly explained by their lower level of skills and discretion, more intense jobs, accompanied by poorer social environments. On the contrary, in the majority of countries, young workers reported working in safer physical environments; presumably due to their higher participation in the newer tertiary sector.

Notably, even though young workers have significantly worse IJQ than the eldest workers, the relative situation of mid-age groups is not constant across countries. This explains that the interaction term between age and country over IJQ resulted significant (Table 5.2).

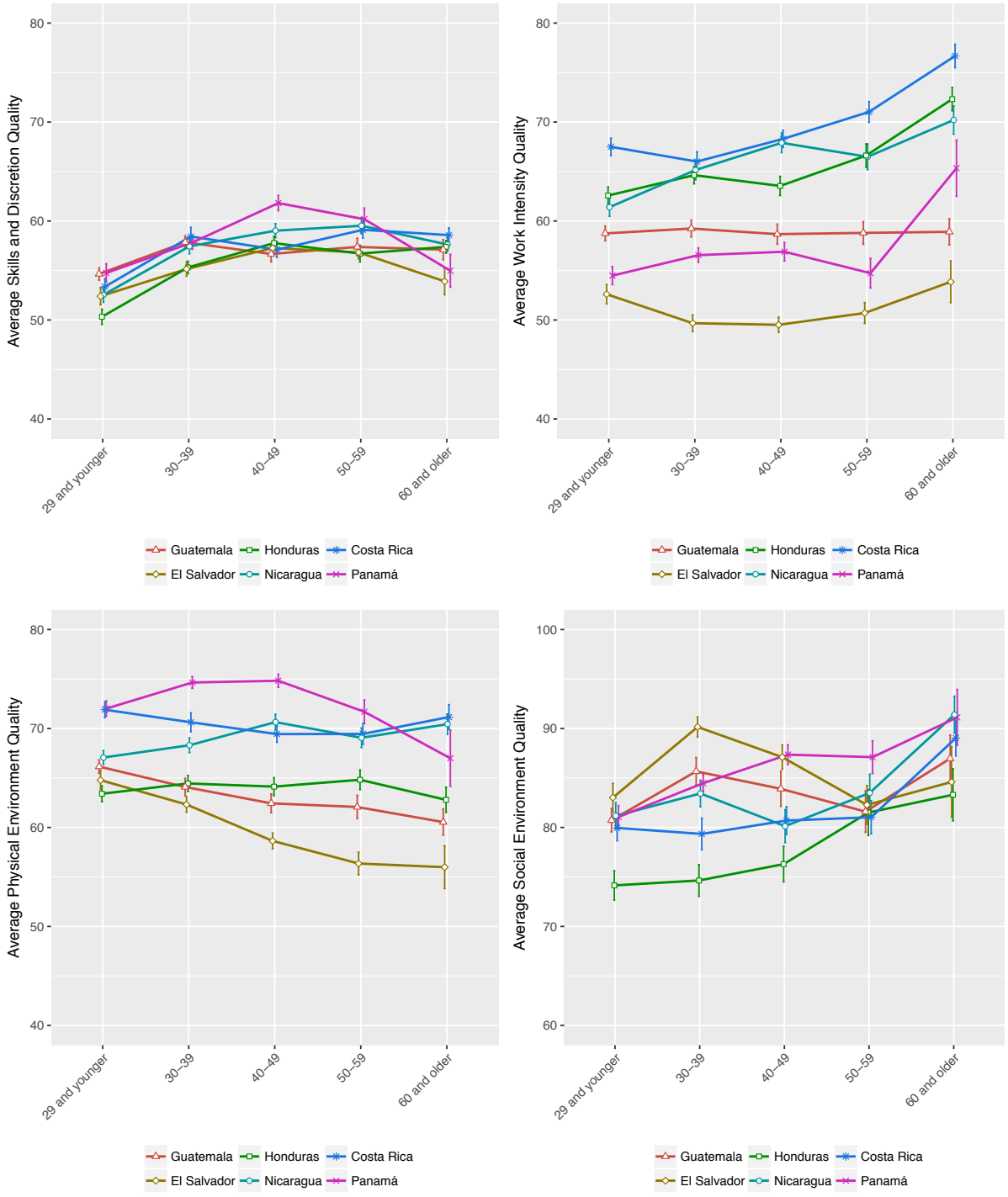
[80] The inconsistencies in the European evidence are explained by the use of different indicators to measure quality of working time. While the 2012 Eurofound report is based on Green and Mostafa's scale of WTQ, Muñoz de Bustillo et al. (2011) use a composite index that includes work intensity as an additional item.

Figure 5.4. Average monthly earnings, IJQ and WTQ, by age group and country



Source: author's elaboration from ECCTS 2011.

Figure 5.5. Mean scores of IJQ sub-components by country and age group



Source: author's elaboration from ECCTS 2011.

Table 5.2. ANOVA results for earnings, WTQ and IJQ, with age as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	age group	0.014	15	4	38.3	0.000	***
	residuals		1050	10945			
Model 2	age group	0.010	8	4	26.3	0.000	***
	gender	0.030	26	1	333.4	0.000	***
	occupation	0.066	60	3	256.9	0.000	***
	country	0.112	106	5	273.5	0.000	***
	residuals		843	10844			
Model 3	age group	0.002	2	4	5.2	0.000	***
	gender	0.030	26	1	331.5	0.000	***
	occupation	0.066	60	3	255.4	0.000	***
	country	0.037	32	5	82.1	0.000	***
	age group*country	0.003	2	20	1.5	0.080	
	residuals		841	10824			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	age group	0.001	2871	4	1.6	0.162	
	residuals		5268004	12002			
Model 2	age group	0.001	5786	4	3.4	0.009	**
	gender	0.007	34570	1	80.4	0.000	***
	occupation	0.013	66782	3	51.8	0.000	***
	country	0.006	30575	5	14.2	0.000	***
	residuals		5115794	11897			
Model 3	age group	0.000	2476	4	1.4	0.218	
	gender	0.007	34805	1	81.0	0.000	***
	occupation	0.013	66813	3	51.8	0.000	***
	country	0.003	17895	5	8.3	0.000	***
	age group*country	0.002	11913	20	1.4	0.116	
	residuals		5103881	11877			
Outcome = IJQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	age group	0.006	12505	4	19.2	0.000	***
	residuals		1957242	12019			
Model 2	age group	0.009	16052	4	26.3	0.000	***
	gender	0.004	6640	1	43.6	0.000	***
	occupation	0.031	57835	3	126.5	0.000	***
	country	0.021	38809	5	50.9	0.000	***
	residuals		1815375	11913			
Model 3	age group	0.001	2364	4	3.9	0.004	**
	gender	0.004	6434	1	42.4	0.000	***
	occupation	0.030	55992	3	123.0	0.000	***
	country	0.006	10096	5	13.3	0.000	***
	age group*country	0.006	10975	20	3.6	0.000	***
	residuals		1804400	11893			

* p < .05; **p < .01; ***p < .001. Note: all analyses were carried out using Type III Tests.
Source: author's elaboration from ECCTS 2011.

5.1.3 Educational differences in job quality

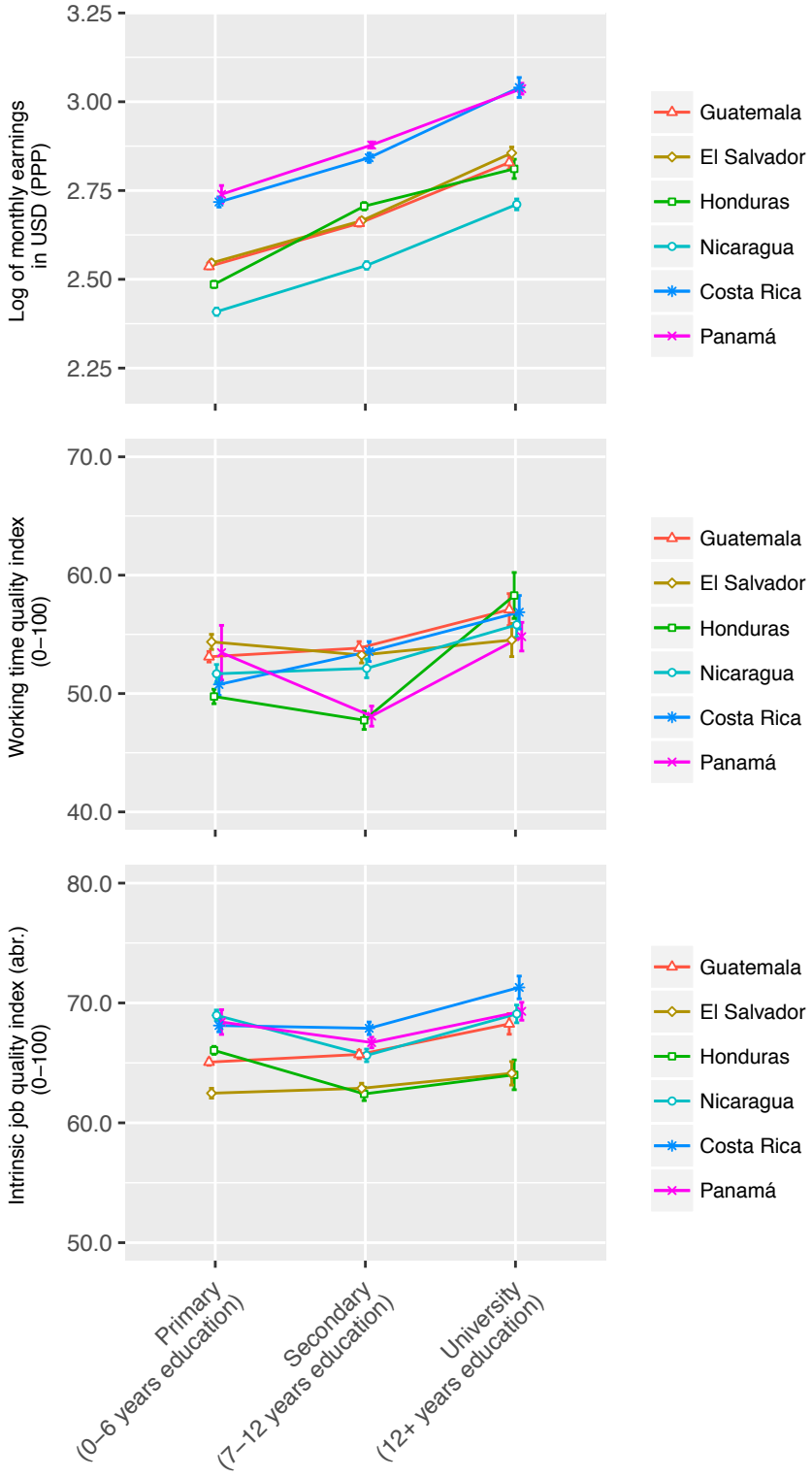
Educational gaps are likely to appear in terms of wages, autonomy, physical environment and flexibility of work schedule, where the least educated workers tend to be worse off. According to Stier's international comparative study (2015), the skill divide in JQ should be smoother in countries that have invested in technological development.

In our results, the educational gradient in terms of wages was clearly confirmed. Monthly income resulted positively and strongly correlated with educational attainment in all Central American countries (Figure 5.6). On average, the least educated workers can earn less than half of workers with university degrees (M=420 and SD=305, versus M=902 and SD=726, in US$). As observed in Table 5.3, the main effect of education on earnings (*partial* η^2 = .127, p<.001) remained large after controlling for the effects of age, gender and country. The pattern was very similar across countries, except for Honduras: therein there was a wider gap between least educated workers and people with secondary education, which presumably explains the existence of a significant interaction term in the ANOVA.

At the aggregate level, working time for the more educated workers (M=56.1, SD=19.3) was also slightly of a better quality than for those with the lowest educational attainment (M=52.1, SD=21.4). The higher WTQ of workers with university is mainly explained by their shorter hours of work, more conducive schedules, and better short-time flexibility. The main effect of education on WTQ was small (*partial* η^2 = .004, p<.001) although Green and Mostafa (Eurofound, 2012) also came across a weak association between education and WTQ among European workers. The effect was not the same across all countries either: Panama and Honduras departed from the continental pattern, in that workers with secondary education reported a worst working time on average, compared to the least educated category, interaction that yielded significant in the ANOVA.

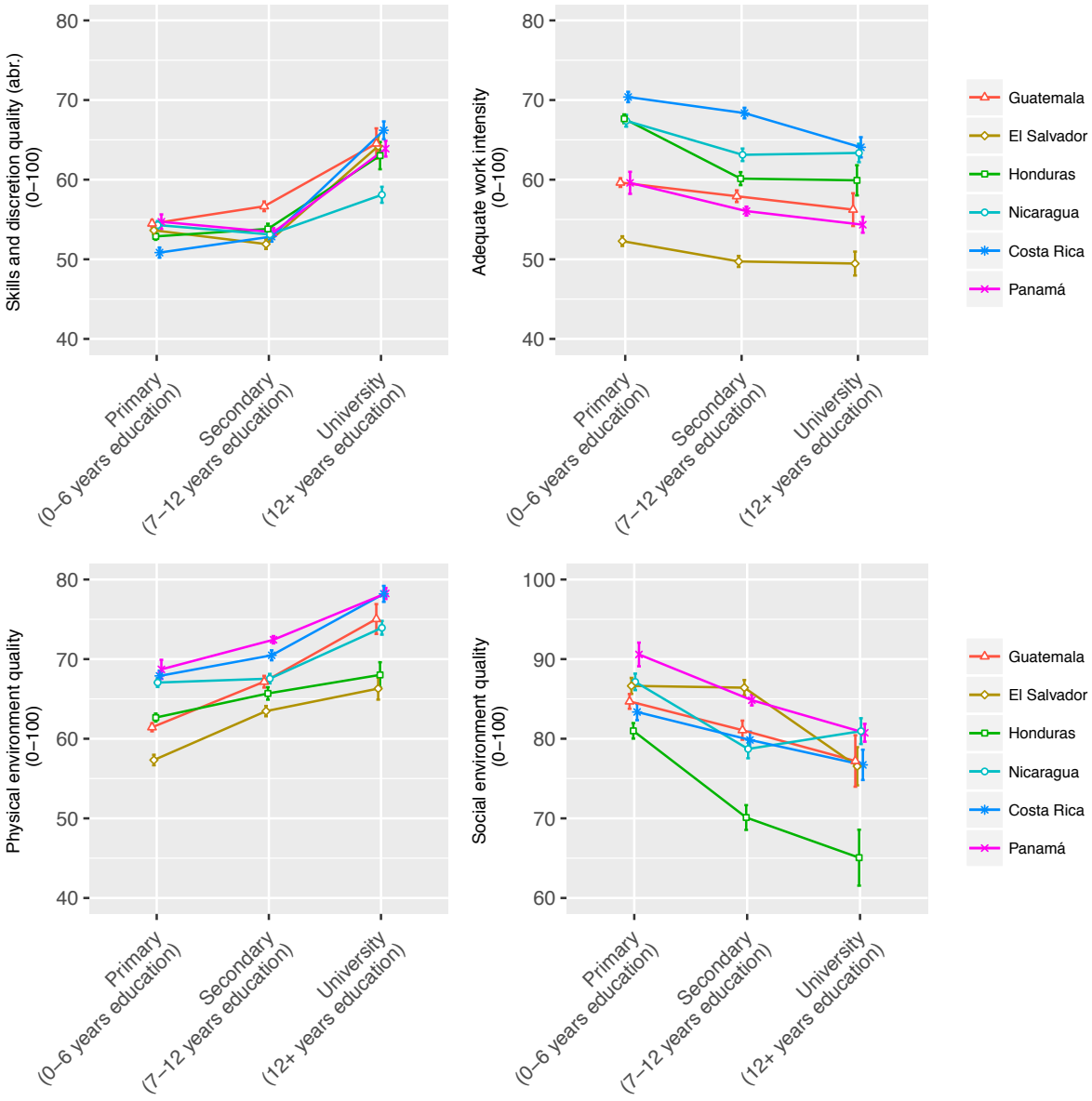
The IJQ index is comprised of a measure of education, then it was necessary to remove that item and analyse an abbreviated version of the index to see how the scale relates to educational attainment. The association appeared very weak at first sight (Figure 5.6), with an effect size that remained small even after controlling for age, gender and country (*partial* η^2 = .003, p<.001). However, a deeper look into the components of this index showed contrasting relationships (see Figure 5.7). On the one hand, and matching the evidence, education was positively associated with discretion and with the quality of physical environment. On the other, education was negatively related to intensity and the social quality of jobs, which also is to be expected given that workers with higher educational attainment often perform jobs that demand working to tight deadlines and in more competitive environments.

Figure 5.6. Average monthly earnings, IJQ and WTQ, by educational level and country



Source: author's elaboration from ECCTS 2011.

Figure 5.7. Mean scores of IJQ sub-components by country and educational level



Source: author's elaboration from ECCTS 2011.

Table 5.3. ANOVA results for earnings, WTQ and IJQ, with education as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	education	0.127	135	2	794.0	0.000	***
	residuals		930	10947			
Model 2	education	0.120	109	2	744.1	0.000	***
	gender	0.023	19	1	263.1	0.000	***
	age group	0.014	11	4	38.2	0.000	***
	country	0.103	92	5	251.1	0.000	***
	residuals		799	10937			
Model 3	education	0.028	23	2	156.8	0.000	***
	gender	0.024	20	1	270.3	0.000	***
	age group	0.013	11	4	37.0	0.000	***
	country	0.039	32	5	88.7	0.000	***
	education*country	0.004	4	10	4.9	0.000	***
	residuals		796	10927			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	education	0.004	19049	2	21.8	0.000	***
	residuals		5251826	12004			
Model 2	education	0.004	18295	2	21.1	0.000	***
	gender	0.004	20622	1	47.6	0.000	***
	age group	0.001	3840	4	2.2	0.065	
	country	0.007	34145	5	15.8	0.000	***
	residuals		5195059	11994			
Model 3	education	0.000	2304	2	2.7	0.070	
	gender	0.004	20625	1	47.7	0.000	***
	age group	0.001	3695	4	2.1	0.074	
	country	0.003	16375	5	7.6	0.000	***
	education*country	0.003	13305	10	3.1	0.001	***
	residuals		5181754	11984			
Outcome = IJQ (abbreviated)							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	education	0.005	9056	2	27.6	0.000	***
	residuals		1969722	12021			
Model 2	education	0.002	4718	2	15.0	0.000	***
	gender	0.013	25736	1	163.2	0.000	***
	age group	0.008	15337	4	24.3	0.000	***
	country	0.018	34600	5	43.9	0.000	***
	residuals		1894689	12011			
Model 3	education	0.001	2470	2	7.9	0.000	***
	gender	0.014	26719	1	170.2	0.000	***
	age group	0.008	15446	4	24.6	0.000	***
	country	0.012	22042	5	28.1	0.000	***
	education*country	0.006	10926	10	7.0	0.000	***
	residuals		1883762	12001			

*p < .05; **p < .01; ***p < .001. Note: All analyses were carried out using Type III Tests. The IJQ index is in its abbreviated version that excludes occupation and education items. Additionally, in this case occupation was not included as control variable because its value may be determined or influenced by education, making it endogenous.
Source: author's elaboration from ECCTS 2011.

5.1.4 Job quality among ethnic and national minorities

Either mediated by educational levels, specific industrial insertion or discriminatory attitudes, the literature also points out to a strong JQ divide between international *migrant* and local workers, as well as in detriment of *ethnic* minorities (Bonacich, 1972). Most of this argument originates in traditional market segmentation theories, which claimed that immigrants are typically found in secondary segments of the economy, characterised by worst working conditions, low pay, few prospects for promotion and unstable employment. Evidence from the United States even point out to the overrepresentation of black and Hispanic minorities in low-wage, manual-labour and more hazardous occupations (Stanbury & Rosenman, 2014). The situation is any different in developing countries, where workers from specific national and ethnic minorities (e.g. indigenous and afro-descendants) are often subject to low-paid jobs, highly intense activities in the primary sector, oppressive and exploitative social relationships (Gindling, 2009; Hopenhayn et al., 2006; Martínez & Reboiras, 2008; Tokman, 2008).

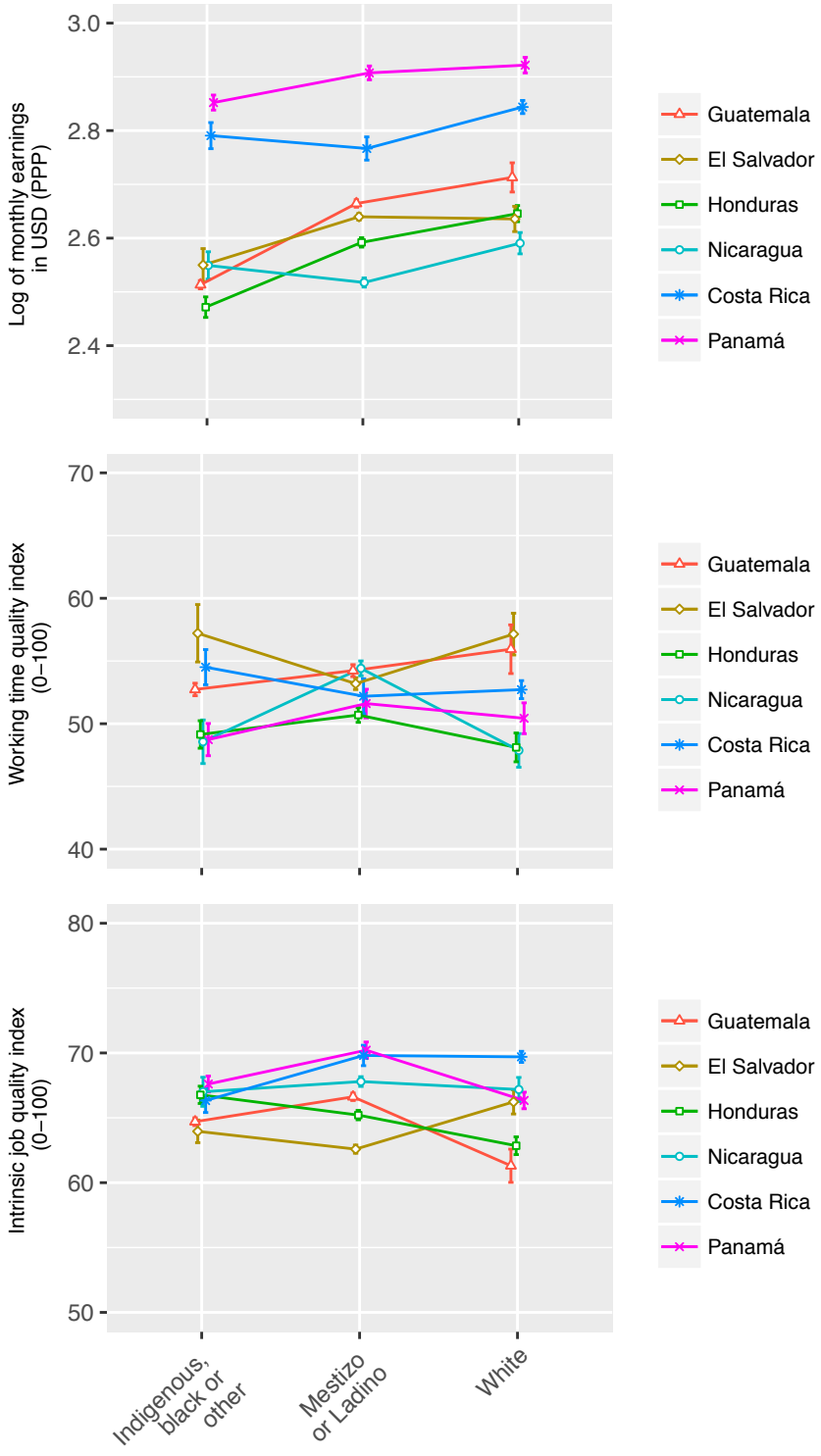
Indeed, our results showed that monthly income was on average lower among indigenous and black workers (M=490, SD=403 in US$) than for mestizos (X=526, SD=393), and considerably lower than for white workers (M=731, SD=585). The main effect of ethnicity yielded significant at the 99.9% level; it decreased from *partial* η^2=.036 to .029 once gender and age were held constant. In Figure 5.8 is also observed that the association between income and ethnicity varied across countries, what explains the significant interaction term in the ANOVA table: in Nicaragua and Costa Rica, indigenous and other minorities do not earn less than white workers, as in the rest of the countries.

As noticed in the same figure, the association between ethnicity and WTQ varied markedly between countries and yielded very weak (*partial* η^2=.001, p <.001); only significant at the 99% level. In Nicaragua and Panama, the minority ethnic group performed worse than mestizos in terms of WTQ, but not worse than those of white background.

Also, the effect of ethnicity on IJQ was as small as on WTQ. The pattern differed widely between countries: while in Honduras, Guatemala and Panama white workers reported the lowest IJQ – mainly due to more intense and poorer social environment as deduced from Figure 5.9 – in Costa Rica, the most disadvantaged group were indigenous, blacks and mulattos.

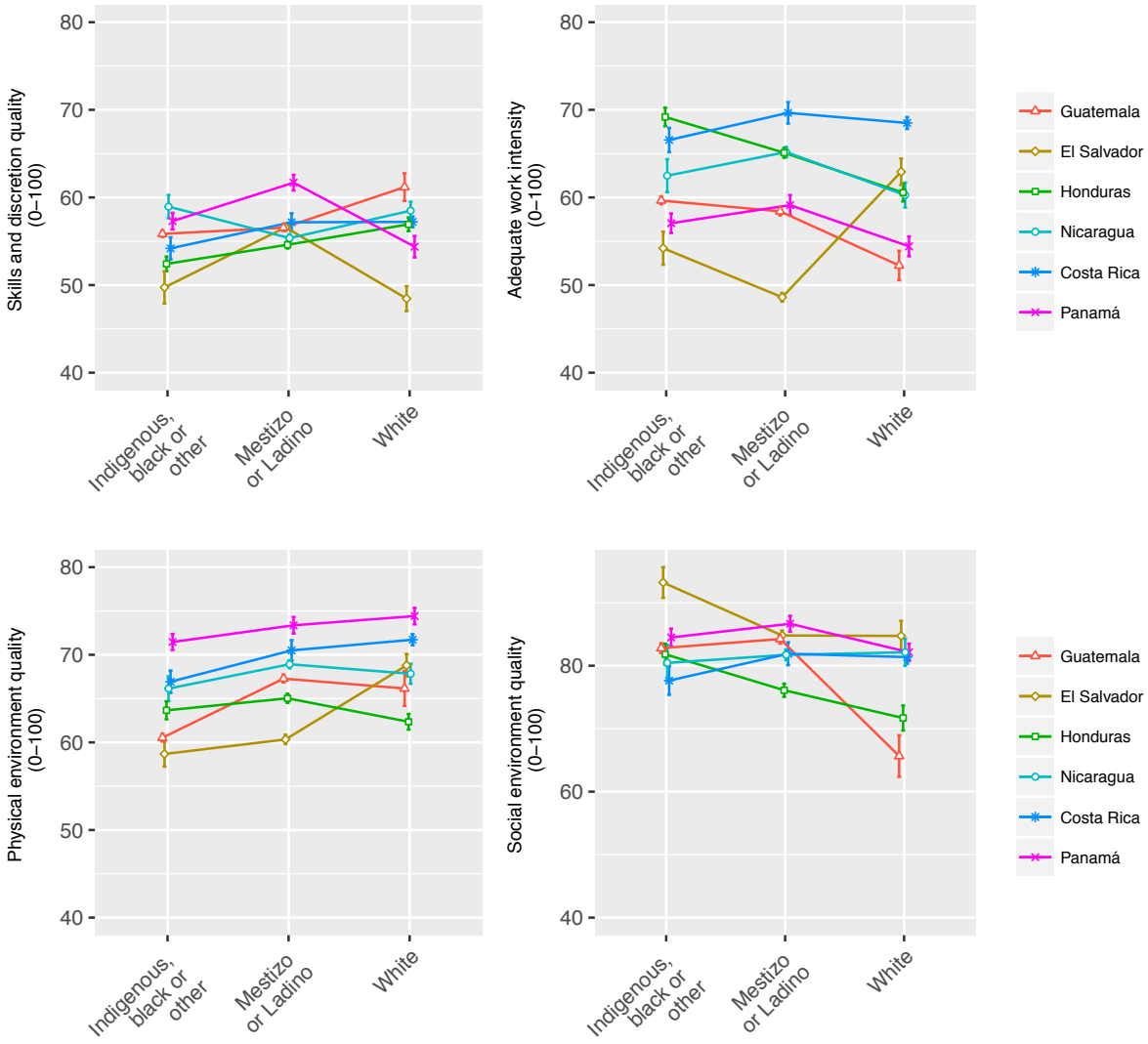
Considering the small sample of international migrant workers in Costa Rica, it was confirmed that they earn significantly less than local workers (M=675, SD=449 versus M=838, SD=636 in US $). The size of this effect remained almost unchanged after factoring in characteristics of gender and age, though only significant at the 95% confidence level (from R^2 = .005, p < .01 to R^2 = .006, p < .05). Migrants in Costa Rica also reported significantly worse quality of working time than local workers (M=47.4, SD=20.8 versus M=53.5, SD=21.1). While their expected disadvantage in IJQ resulted significant at 95% only, with gender and age effects accounted for.

Figure 5.8. Average monthly earnings, IJQ and WTQ, by ethnic group and country



Source: author's elaboration from ECCTS 2011.

Figure 5.9. Mean scores of IJQ sub-components by country and ethnic group



Source: author's elaboration from ECCTS 2011.

Table 5.4. ANOVA results for earnings, WTQ and IJQ, with ethnicity as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	ethnicity	0.036	36	2	196.0	0.000	***
	residuals		967	10411			
Model 2	ethnicity	0.029	25	2	154.0	0.000	***
	gender	0.016	13	1	167.4	0.000	***
	age group	0.013	11	4	35.1	0.000	***
	country	0.108	101	5	252.9	0.000	***
	residuals		835	10401			
Model 3	ethnicity	0.024	21	2	129.7	0.000	***
	gender	0.016	14	1	170.9	0.000	***
	age group	0.014	11	4	36.0	0.000	***
	country	0.029	25	5	61.7	0.000	***
	ethnicity*country	0.009	7	10	9.2	0.000	***
	residuals		828	10391			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	ethnicity	0.001	6303	2	7.2	0.001	***
	residuals		5011373	11441			
Model 2	ethnicity	0.001	4839	2	5.6	0.004	**
	gender	0.005	22759	1	52.4	0.000	***
	age group	0.001	3823	4	2.2	0.066	
	country	0.005	26029	5	12.0	0.000	***
	residuals		4960278	11431			
Model 3	ethnicity	0.000	1977	2	2.3	0.102	
	gender	0.004	22153	1	51.2	0.000	***
	age group	0.001	3850	4	2.2	0.064	
	country	0.004	17436	5	8.1	0.000	***
	ethnicity*country	0.003	15695	10	3.6	0.000	***
	residuals		4944583	11421			
Outcome = IJQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	ethnicity	0.001	2343	2	7.1	0.001	***
	residuals		1899530	11458			
Model 2	ethnicity	0.001	2656	2	8.4	0.000	***
	gender	0.014	26642	1	167.5	0.000	***
	age group	0.007	13608	4	21.4	0.000	***
	country	0.022	41459	5	52.1	0.000	***
	residuals		1820421	11448			
Model 3	ethnicity	0.002	3949	2	12.5	0.000	***
	gender	0.015	26720	1	169.0	0.000	***
	age group	0.008	13685	4	21.6	0.000	***
	country	0.010	17496	5	22.1	0.000	***
	ethnicity*country	0.007	11876	10	7.5	0.000	***
	residuals		1808545	11438			

*p < .05; **p < .01; ***p < .001. All analyses were carried out using Type III Tests. As with education, occupation was excluded from the model because it can represent an endogenous control variable when estimating the effect of ethnicity.
Source: author's elaboration from ECCTS 2011.

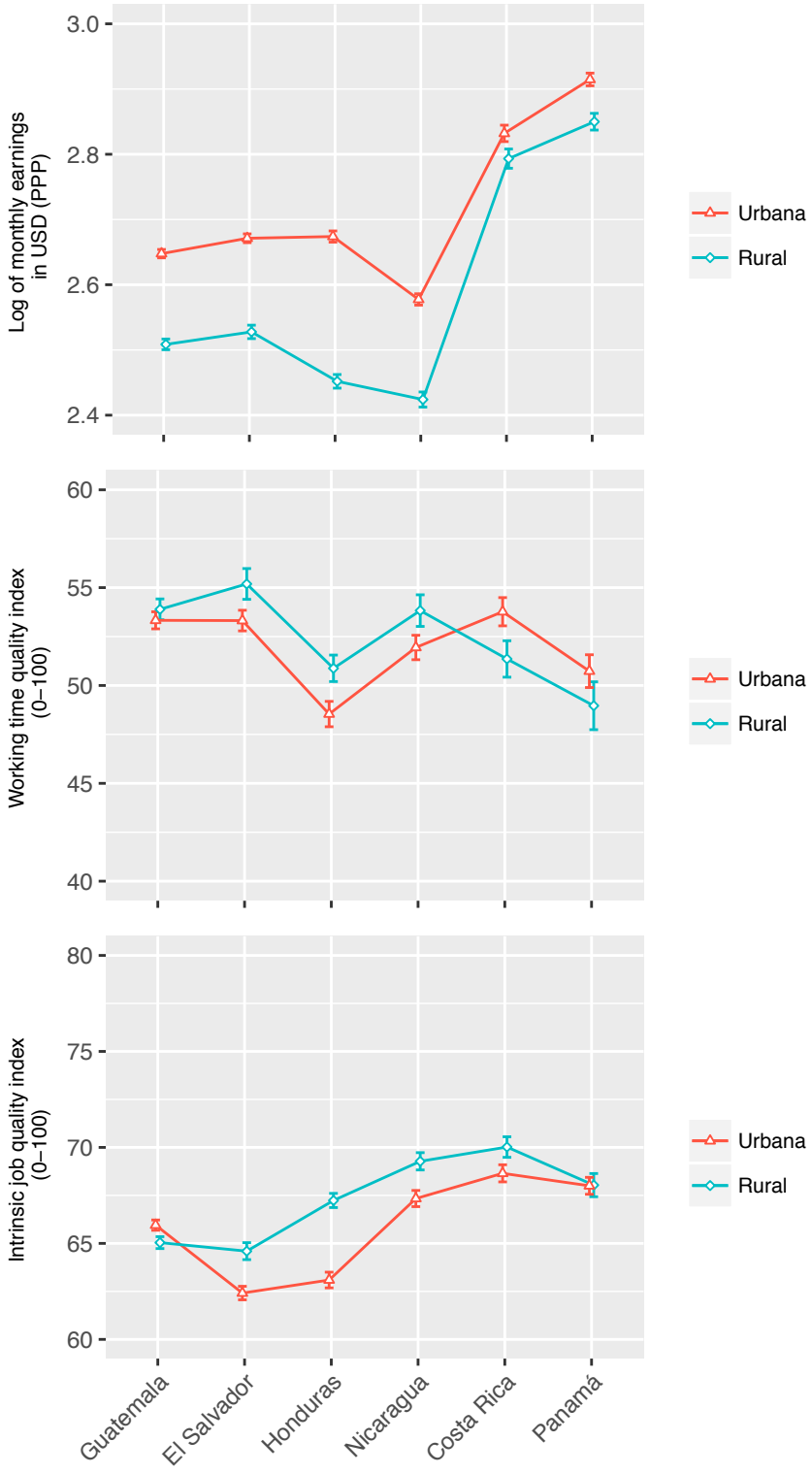
5.1.5 Job quality inequalities between workers from urban and rural settings

In Central America as in other regions of Latin America, workers in rural zones have been also associated to poorer working conditions. The results of our analysis, presented in Figure 5.10, established that rural workers reported significantly lower monthly income (M=444, SD=365 in US$) than workers in urban zones (M=608, SD=470 in US$). The size of this effect was equivalent to *partial* η^2 = .056, which only changed marginally after holding constant the effects of gender, age, occupation, and country (*partial* η^2 = .047, p<.001). Interestingly, the 'geographic' wage gap narrowed somewhat in Costa Rica and Panama, both of which present smaller proportions of rural population compared to the rest of the isthmus (see Chapter 3).

Rural workers, on the other hand, seemed to enjoy better quality of working time in countries like El Salvador, Honduras and Nicaragua, but the results of an analysis of variances indicated that the overall effect of residence zone on WTQ was not statistically significant (see Table 5.5).

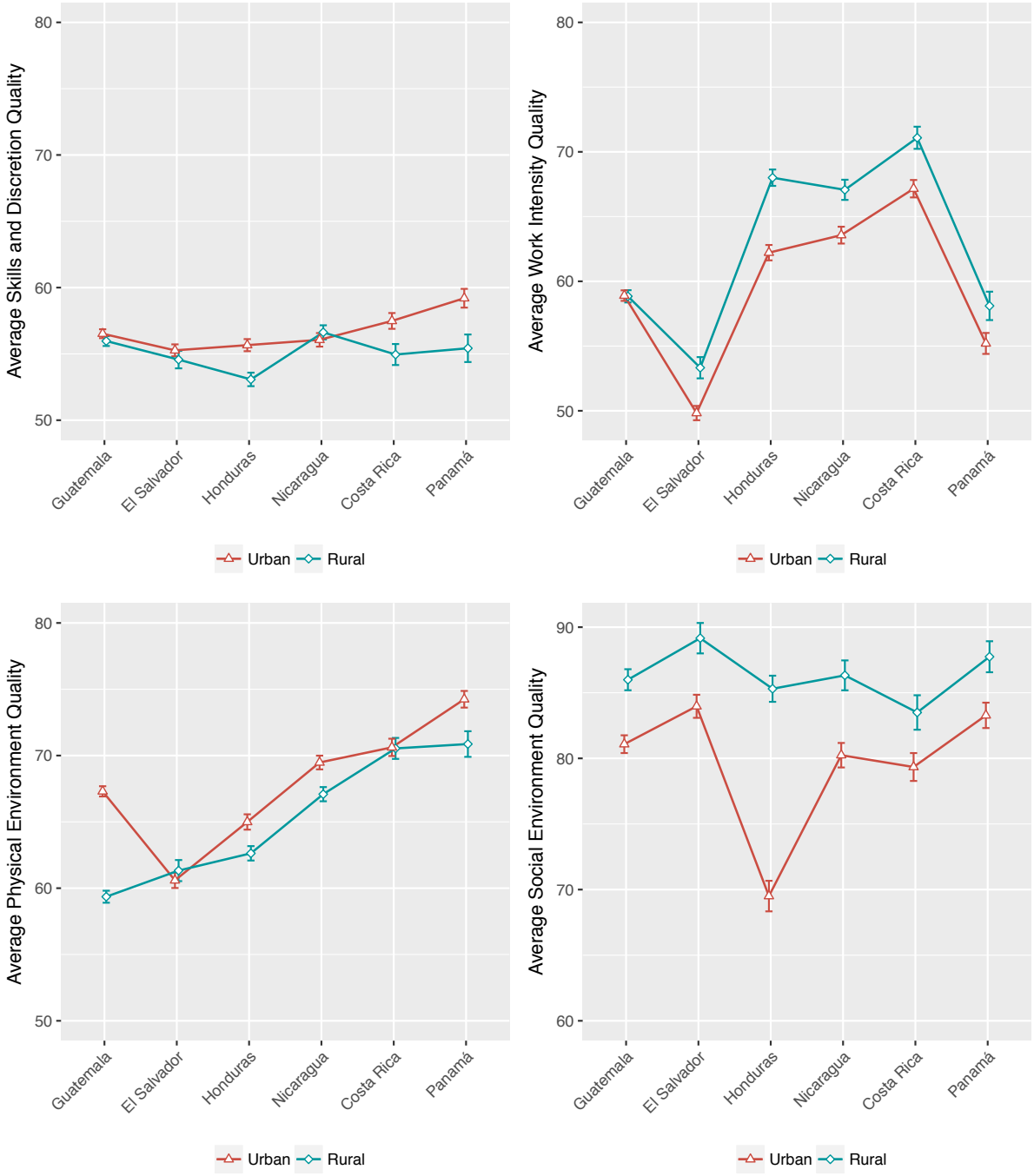
At the continent level, IJQ was higher for rural workers (M=66.8, SD=13.3) compared to urban workers (M=65.6, SD=11.8), an effect of magnitude equivalent to *partial* η^2 = .009, p<.001 (with age, gender, occupation and country held constant). Yet, the ANOVA results confirmed the existence of a significant interaction between the effect of geographic area and country, which is presumably explained by the cases of Guatemala and Panama, where urban and rural workers enjoy virtually the same level of intrinsic job amenities. As detailed in Figure 5.11, the higher IJQ of rural workers in most countries was largely explained by their less intense jobs and richer social environments.

Figure 5.10. Average monthly earnings, IJQ and WTQ, by geographic zone and country



Source: author's elaboration from ECCTS 2011.

Figure 5.11. Mean scores of IJQ sub-components by country and geographic zone



Source: author's elaboration from ECCTS 2011.

Table 5.5. ANOVA results for earnings, WTQ and IJQ, with area of residence as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	area	0.056	60	1	651.1	0.000	***
	residuals		1005	10948			
Model 2	area	0.047	40	1	537.5	0.000	***
	gender	0.036	30	1	410.4	0.000	***
	age group	0.010	8	4	26.3	0.000	***
	occupation	0.044	37	3	165.8	0.000	***
	country	0.116	106	5	284.9	0.000	***
	residuals		803	10843			
Model 3	area	0.015	12	1	161.1	0.000	***
	gender	0.037	31	1	415.9	0.000	***
	age group	0.010	8	4	26.5	0.000	***
	occupation	0.042	35	3	160.0	0.000	***
	country	0.065	55	5	149.8	0.000	***
	area*country	0.008	6	5	17.2	0.000	***
	residuals		797	10838			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	area	0.000	1094	1	2.5	0.114	
	residuals		5269781	12005			
Model 2	area	0.000	1503	1	3.5	0.062	
	gender	0.007	35386	1	82.3	0.000	***
	age group	0.001	5769	4	3.4	0.009	**
	occupation	0.012	63854	3	49.5	0.000	***
	country	0.006	31485	5	14.6	0.000	***
	residuals		5114291	11896			
Model 3	area	0.000	136	1	0.3	0.574	
	gender	0.007	35694	1	83.1	0.000	***
	age group	0.001	5731	4	3.3	0.010	**
	occupation	0.012	63271	3	49.1	0.000	***
	country	0.005	24678	5	11.5	0.000	***
	area*country	0.001	7305	5	3.4	0.005	**
	residuals		5106985	11891			
Outcome = IJQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	area	0.002	4096	1	25.1	0.000	***
	residuals		1965651	12022			
Model 2	area	0.009	16974	1	112.4	0.000	***
	gender	0.004	8106	1	53.7	0.000	***
	age group	0.008	14702	4	24.3	0.000	***
	occupation	0.036	67152	3	148.3	0.000	***
	country	0.021	37807	5	50.1	0.000	***
	residuals		1798401	11912			
Model 3	area	0.001	959	1	6.4	0.012	*
	gender	0.005	8347	1	55.6	0.000	***
	age group	0.009	15619	4	26.0	0.000	***
	occupation	0.036	66400	3	147.4	0.000	***
	country	0.019	33759	5	45.0	0.000	***
	area*country	0.006	9911	5	13.2	0.000	***
	residuals		1788490	11907			

*p < .05; **p < .01; ***p < .001. Note: all analyses were carried out using Type III Tests.
Source: author's elaboration from ECCTS 2011.

5.2 Associations between job quality and occupational characteristics

5.2.1 Job quality across occupational categories

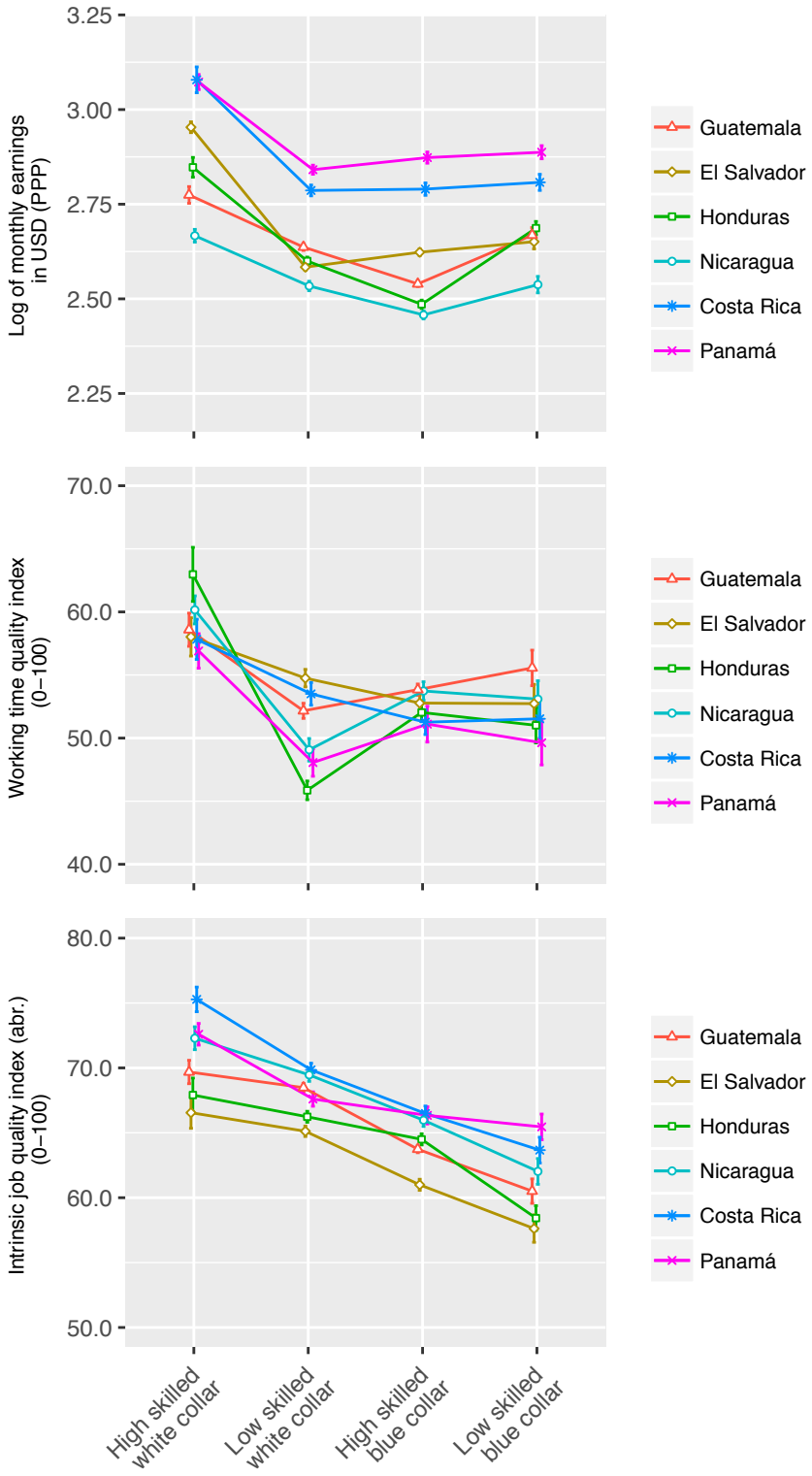
There is a bulk of literature suggesting that occupation is a good predictor of JQ – even more so than industry – with managerial and professional (white collar) occupations often ranking better than manual (blue collar) occupations. For instance, the 2010 EWCS evidenced that professional workers perceive significantly higher income and better job prospects. Prestigious occupations like managers, lawyers, physicians and engineers may be subject to higher psychological demands but also exert high decision power, reducing their overall job strain (Karasek & Theorell, 1990). Whereas the opposite can be anticipated for workers with blue collar occupations.

Our indices of JQ neatly confirmed this hypothesis for Central America. In Figure 5.12, for instance, monthly income appeared strongly correlated to occupation; with managers, technicians and associate professionals at the top of all other categories. Professional occupations as a whole, seemed to get significantly higher earnings (M=892, SD=679 in US$) than non-professional occupations (M=519, SD=403); that is, a gap equivalent to 58% of professional workers' salary. Generally, the different occupational categories are highly correlated with gender, but even after accounting for this variable and other demographic characteristics, the size of the occupational effect on pay remained significant at *partial* $\eta^2 = .066$, $p < .001$ (Table 5.6).

WTQ was also markedly higher for high skilled white collar workers, largely due to their shorter working hours, better schedules and higher short-term flexibility. This is interesting in light of other evidence which suggests that these kinds of occupations demand more working hours of planning and administrative work (Eurofound, 2012; Vallebuona, 2011). In Central America, this is rather the case of low skilled white collar workers (e.g. clerical support, service, shop and market sales). All in all, the effect of occupation on WTQ was significant at the 99.9% level, and equivalent in magnitude to *partial* $\eta^2 = .013$, $p < .001$ after controlling for gender, age and country.

The IJQ index is also comprised by a measure of occupation, therefore we used an abbreviated version of such index to analyse its relationship with occupation, which also resulted significant, after accounting for demographic characteristics of workers (*partial* $\eta^2 = .032$, $p < .001$). Confirming what other studies say, the higher IJQ reported by managers and professionals is mainly explained by their higher discretion, as well as safer physical environments where they perform (see Figure 5.13). Of further interest, skilled blue collar (agricultural, forestry and fishery workers mainly) had the highest quality of social environment, but exactly the lowest quality of physical environment.

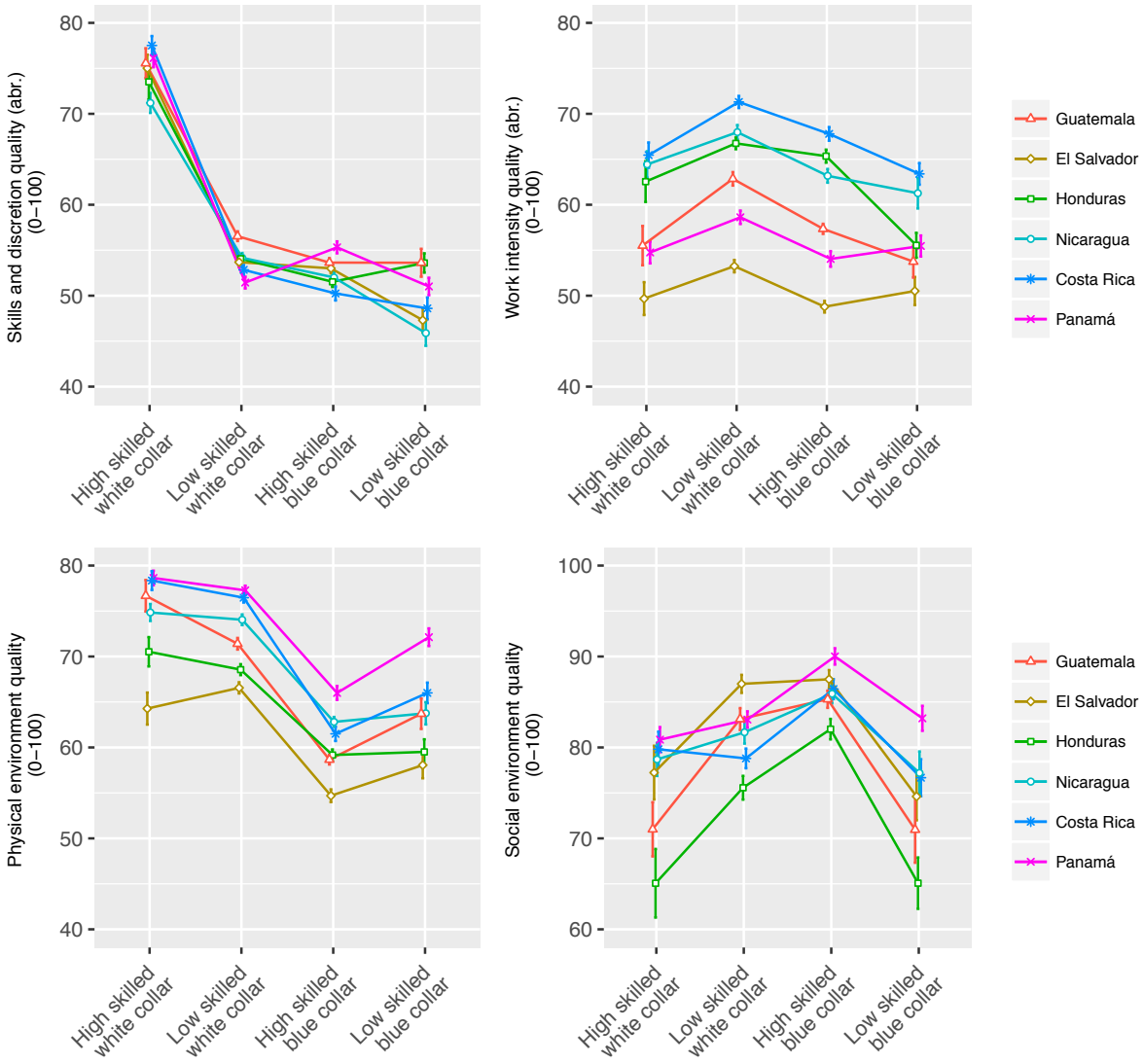
Figure 5.12. Average monthly earnings, IJQ and WTQ, by occupation and country



Source: author's elaboration from ECCTS 2011.

Although the occupational effects on JQ look similar across countries in Figure 5.12, in no case the patterns are exactly parallel; which explains that the interaction terms between country and occupation over the three dimensions resulted significant at the 99.9% level (see Table 5.6).

Figure 5.13. Mean scores of IJQ sub-components by country and occupation



Source: author's elaboration from ECCTS 2011.

Table 5.6. ANOVA results for earnings, WTQ and IJQ, with occupation as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	occupation	0.061	64	3	233.4	0.000	***
	residuals		992	10854			
Model 2	occupation	0.066	60	3	256.9	0.000	***
	gender	0.030	26	1	333.4	0.000	***
	age group	0.010	8	4	26.3	0.000	***
	country	0.112	106	5	273.5	0.000	***
	residuals		843	10844			
Model 3	occupation	0.022	19	3	81.9	0.000	***
	gender	0.031	26	1	343.3	0.000	***
	age group	0.010	8	4	26.2	0.000	***
	country	0.021	17	5	45.5	0.000	***
	occupation*country	0.015	13	15	11.3	0.000	***
	residuals		830	10829			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	occupation	0.010	53285	3	40.8	0.000	***
	residuals		5185321	11907			
Model 2	occupation	0.013	66782	3	51.8	0.000	***
	gender	0.007	34570	1	80.4	0.000	***
	age group	0.001	5786	4	3.4	0.009	**
	country	0.006	30575	5	14.2	0.000	***
	residuals		5115794	11897			
Model 3	occupation	0.003	12970	3	10.1	0.000	***
	gender	0.007	37793	1	88.3	0.000	***
	age group	0.001	5144	4	3.0	0.017	*
	country	0.000	2001	5	0.9	0.457	
	occupation*country	0.006	32029	15	5.0	0.000	***
	residuals		5083765	11882			
Outcome = IJQ (abbreviated)							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	occupation	**0.041**	79922	3	168.7	0.000	***
	residuals		1882885	11923			
Model 2	occupation	**0.032**	59709	3	129.9	0.000	***
	gender	0.004	6564	1	42.9	0.000	***
	age group	0.010	18239	4	29.8	0.000	***
	country	0.018	34173	5	44.6	0.000	***
	residuals		1824947	11913			
Model 3	occupation	**0.013**	23565	3	51.5	0.000	***
	gender	0.004	7352	1	48.2	0.000	***
	age group	0.010	19068	4	31.2	0.000	***
	country	0.003	5816	5	7.6	0.000	***
	occupation*country	**0.005**	9005	15	3.9	0.000	***
	residuals		1815942	11898			

*p < .05; **p < .01; ***p < .001. Note: all analyses were carried out using Type III Tests. The IJQ is in its abbreviated version that excludes occupation and education items.
Source: author's elaboration from ECCTS 2011.

5.2.2 How is industry related to job quality?

We could anticipate that jobs in the primary sector (e.g. agriculture, farming and fishing activities) score significantly lower than other industries regarding the quality of the physical environment, because of the common exposure to hazardous outdoor environments.[81] Then, according to Eurofound's evidence (2012), workers in the service sector (e.g. information and communication, finance and insurance) perform relatively well in most dimensions of JQ, whereas others claim that the prevalence of abusive behaviours and conflictive workplace relationships is higher in the tertiary sector.

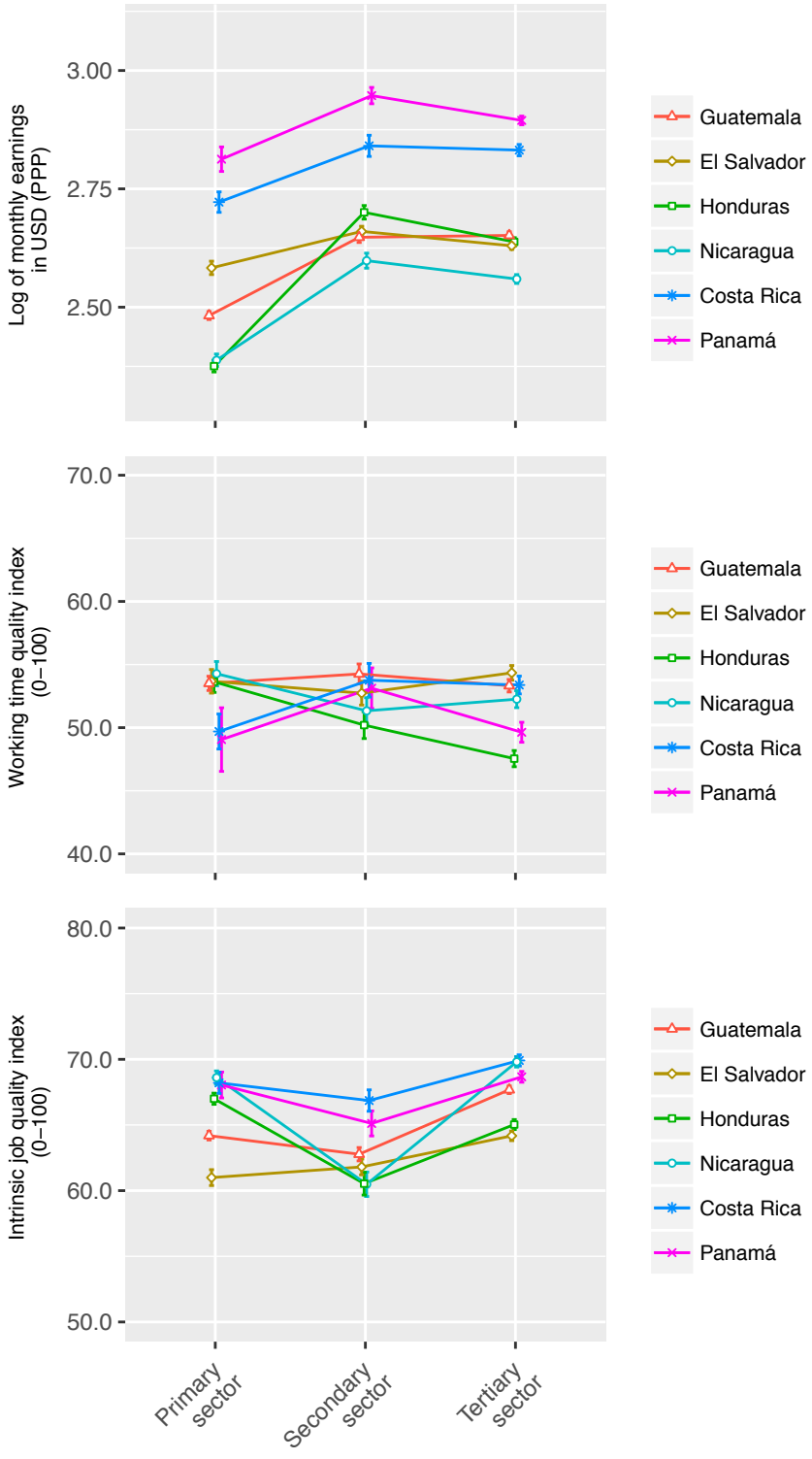
As said by our results at the aggregate level, jobs in the primary sector (M=396, SD=359 in US$) were paid significantly lower than those in the secondary sector (M=595, SD=399), and in the tertiary sector (M=599, SD=469). The overall effect of industry on pay was found significant at the 99.9% level, although its magnitude decreased considerably from *partial* η^2=.14 to .012 after accounting for the confounding effects of gender, occupation and country. In Figure 5.15 it is observed that agriculture, forestry and fishery, followed by household services, were without a doubt the sectors worst paid. At the opposite end, the public sector – including health and education – together with financial services, reported the highest level of monthly earnings. The ANOVA yielded a significant interaction term between country and industry on pay, presumably due to the much lower income of Honduran workers in the primary sector (Figure 5.14).

The effect of industry on WTQ was also significant after accounting for country and demographic factors (*partial* η^2=.005, p<.001). There were substantial variations across countries, but it stands out the higher WTQ in health and education services (explained by their shorter working hours and regular scheduling). Contrasting with their high-income return, workers in the public sector reported lower discretion to decide their own working schedule.

In Honduras and Nicaragua – where highly intense *maquila* factories still function in unregulated contexts – the secondary sector had the lowest IJQ. The primary sector scored high in IJQ, but mostly due to the better social quality of those workplaces. The quality of the physical environment was significantly poorer in the primary sector, as anticipated. At the continent level, IJQ resulted better for workers in the education and health industry – fundamentally explained by their higher level of skills and discretion. At the opposite end and following previous evidence, construction reported the poorest IJQ. All in all, the industry factor explained around 3% of the variance in IJQ at the continent level (*partial* η^2=.03, p<.001), but after the effects of gender, age, occupation and country were accounted for, the size of this effect decreased to .003 (p<.001).

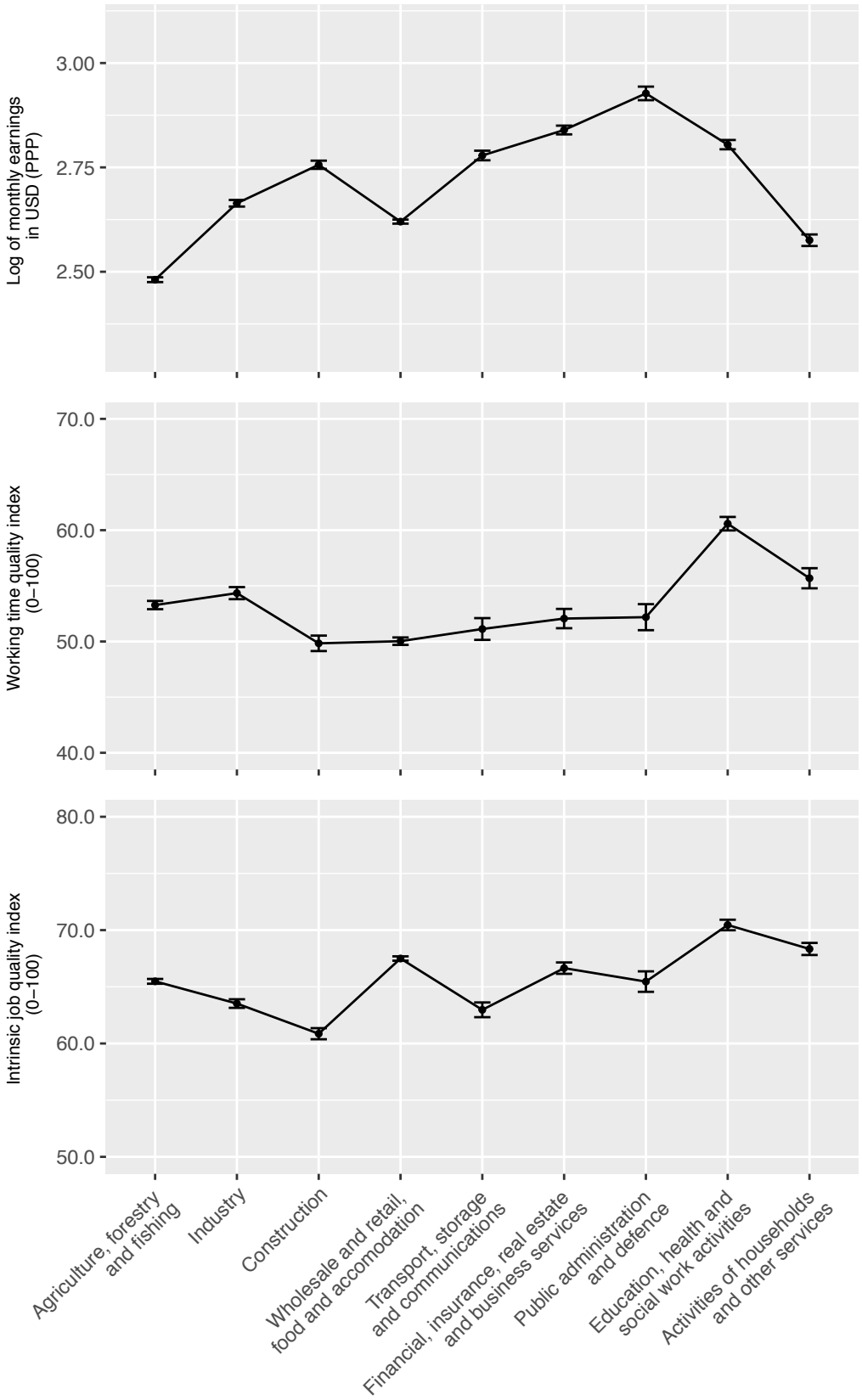
[81] Examples of these correlations between JQ and industry type, with a focus on migrant workers, can be found in Swanberg et al. (2012).

Figure 5.14. Average monthly earnings, IJQ and WTQ, by industry sector and country



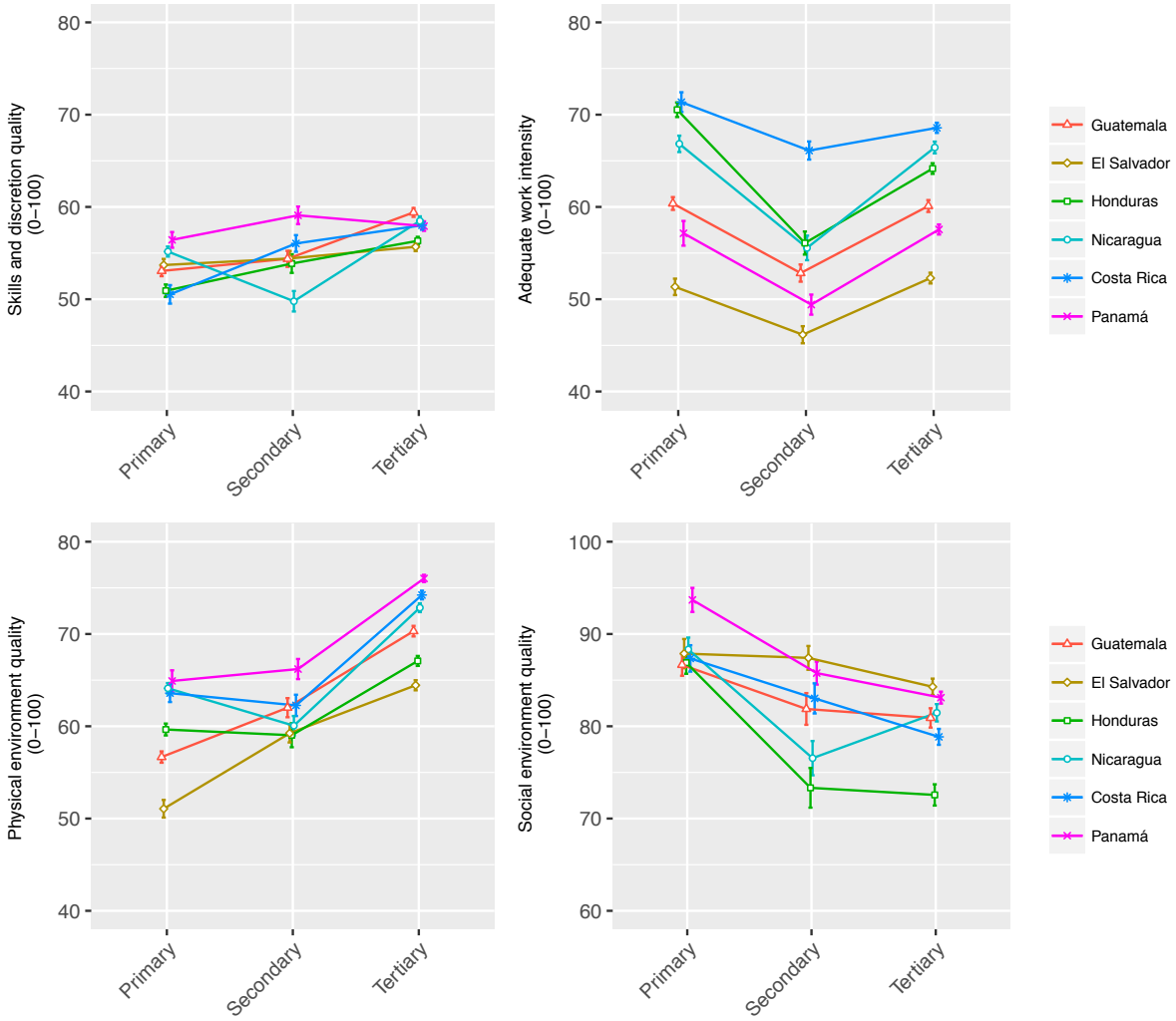
Source: author's elaboration from ECCTS 2011.

Figure 5.15. Average monthly earnings, IJQ and WTQ, by industry (regional level)



Source: author's elaboration from ECCTS 2011.

Figure 5.16. Mean scores of IJQ sub-components by country and industry sector



Source: author's elaboration from ECCTS 2011.

Table 5.7. ANOVA results for earnings, WTQ and IJQ, with industrial sector as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	industry	0.136	145	8	215.7	0.000	***
	residuals		920	10941			
Model 2	industry	0.012	10	8	17.0	0.000	***
	gender	0.030	24	1	335.6	0.000	***
	age group	0.009	7	4	24.8	0.000	***
	occupation	0.025	19	6	45.6	0.000	***
	country	0.102	87	5	245.8	0.000	***
	residuals		769	10833			
Model 3	industry	0.002	1	8	2.6	0.008	**
	gender	0.030	23	1	332.6	0.000	***
	age group	0.009	7	4	24.1	0.000	***
	occupation	0.025	19	6	45.7	0.000	***
	country	0.040	31	5	90.3	0.000	***
	industry*country	0.023	18	40	6.3	0.000	***
	residuals		751	10793			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	industry	0.017	89613	8	25.9	0.000	***
	residuals		5181262	11998			
Model 2	industry	0.005	24272	8	7.1	0.000	***
	gender	0.005	25737	1	60.4	0.000	***
	age group	0.001	5588	4	3.3	0.011	*
	occupation	0.005	23046	6	9.0	0.000	***
	country	0.006	31949	5	15.0	0.000	***
	residuals		5063870	11886			
Model 3	industry	0.001	4469	8	1.3	0.227	
	gender	0.005	25955	1	61.4	0.000	***
	age group	0.001	5192	4	3.1	0.015	*
	occupation	0.005	25078	6	9.9	0.000	***
	country	0.001	5451	5	2.6	0.024	*
	industry*country	0.012	59514	40	3.5	0.000	***
	residuals		5004357	11846			
Outcome = IJQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	industry	0.030	58460	8	45.9	0.000	***
	residuals		1911287	12015			
Model 2	industry	0.003	6073	8	5.0	0.000	***
	gender	0.003	5668	1	37.6	0.000	***
	age group	0.007	12541	4	20.8	0.000	***
	occupation	0.024	43352	6	48.0	0.000	***
	country	0.022	40210	5	53.4	0.000	***
	residuals		1791770	11902			
Model 3	industry	0.003	5714	8	4.8	0.000	***
	gender	0.003	5966	1	40.2	0.000	***
	age group	0.007	13187	4	22.2	0.000	***
	occupation	0.023	40631	6	45.6	0.000	***
	country	0.011	19624	5	26.4	0.000	***
	industry*country	0.017	29838	40	5.0	0.000	***
	residuals		1761932	11862			

*p < .05; **p < .01; ***p < .001. All analyses were carried out using Type III Tests.
Source: author's elaboration from ECCTS 2011.

5.2.3 Job quality across different establishment sizes

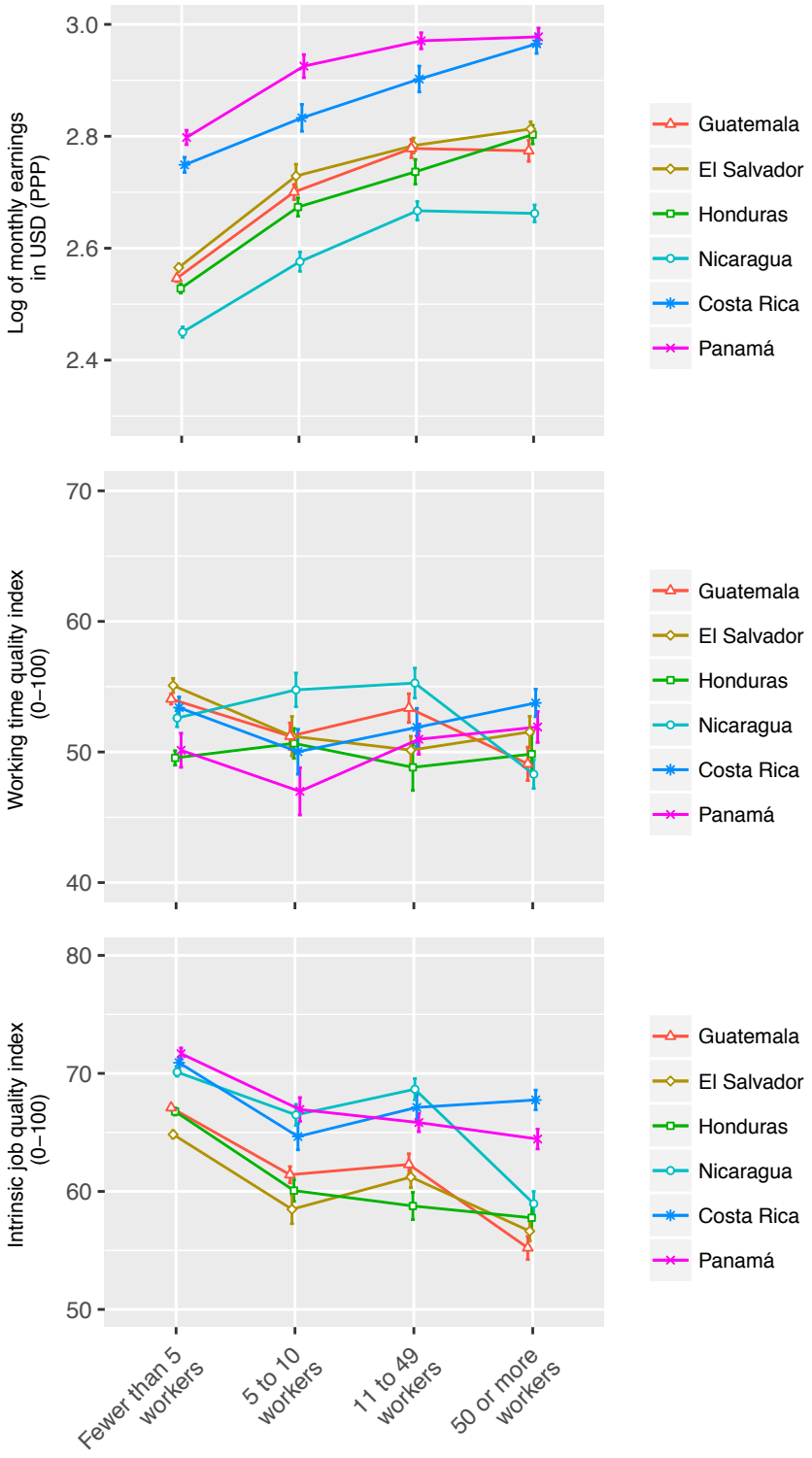
Some aspects of JQ also appear to vary markedly according to the *size of the establishment* in which the person works. European survey data demonstrates that salaries and prospects improve as the business gets larger, nonetheless working time deteriorates. In Latin America too, smaller size firms usually offer worse employment conditions to their workers given their limited access to borrowing markets.

The first graph of Figure 5.17 shows that in Central America monthly income was, indeed, positively related to the number of workers in the business. A one-way analysis of variance yielded a main effect for firm size equivalent to *partial* η^2=.113, p<.001. Wage differences narrowed somewhat after accounting for gender, age, occupation and country; although the effect remained statistically significant (*partial* η^2=.064, p<.001). The effect was similar across countries, which was confirmed by the lack of significance of the interaction term included in the multi-way ANOVA (see Table 5.8).

The association between establishment size and average WTQ was not uniform across countries, yet statistically significant at the continent level (*partial* η^2=.004, p<.001, having accounted for gender, age, occupation and country). Further inspection onto the components of this index evidenced that workers in small businesses had more autonomy to decide and arrange their own schedules. On the contrary, they worked more frequently on weekends and nights, and had less immediate flexibility to attend family or personal issues, which also matches the available evidence.

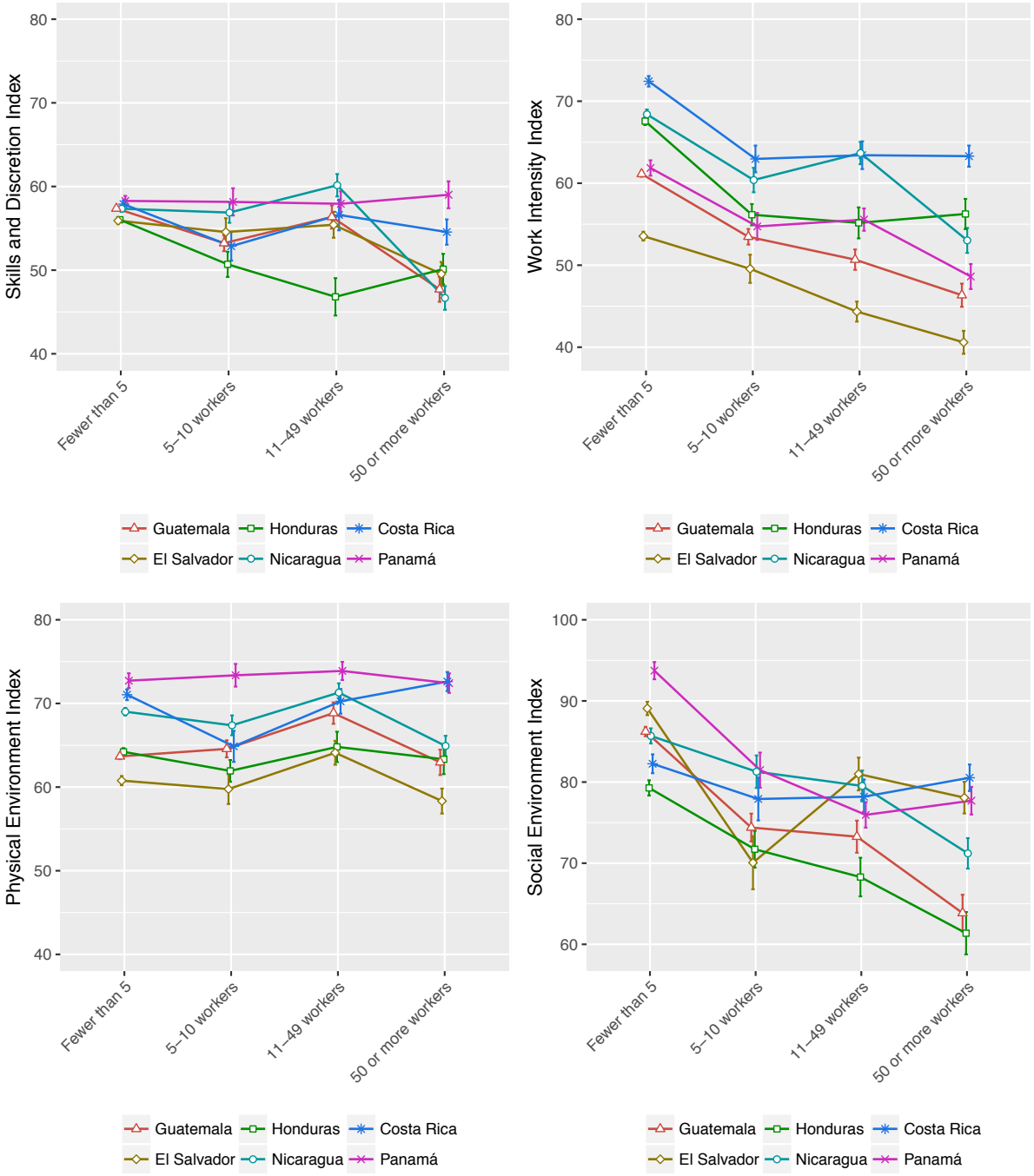
The smallest firms are the ones with highest IJQ (M=67.7, SD=12), whereas the largest organisations had the lowest average score in this dimension (M=60.6, SD=14.3). This matches the compensation effect with pay suggested by Green et al. (1996). Figure 5.18 shows that the better IJQ in small firms was largely explained by the lower intensity of those jobs and their richer social environment, two aspects that behave oppositely in large establishments. The main effect of establishment size on IJQ was of considerable magnitude even after accounting for other related factors (*partial* η^2=.061, p<.001). However, as observed in Table 5.8, the interaction effect between firm size and country was also significant at the 99.9% level, indicating that the effect of firm size was greater in some countries than in others. For instance, the difference in job amenities between the smallest and the largest firms appeared more determinant in Nicaragua than in Costa Rica or Panama.

Figure 5.17. Average monthly earnings, IJQ and WTQ, by firm size and country



Source: author's elaboration from ECCTS 2011.

Figure 5.18. Mean scores of IJQ sub-components by country and firm size



Source: author's elaboration from ECCTS 2011.

Table 5.8. ANOVA results for earnings, WTQ and IJQ, with establishment size as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	firm size	0.113	120	3	460.3	0.000	***
	residuals		935	10789			
Model 2	firm size	0.064	54	3	243.5	0.000	***
	gender	0.029	23	1	317.5	0.000	***
	age group	0.010	8	4	26.7	0.000	***
	occupation	0.042	34	3	155.4	0.000	***
	country	0.094	82	5	222.4	0.000	***
	residuals		785	10687			
Model 3	firm size	0.019	15	3	68.6	0.000	***
	gender	0.029	24	1	320.6	0.000	***
	age group	0.010	8	4	26.9	0.000	***
	occupation	0.042	34	3	156.3	0.000	***
	country	0.061	51	5	138.0	0.000	***
	firm size*country	0.002	2	15	1.7	0.051	
	residuals		783	10672			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	firm size	0.001	6485	3	4.9	0.002	**
	residuals		5208465	11824			
Model 2	firm size	0.004	18257	3	14.1	0.000	***
	gender	0.006	32665	1	75.9	0.000	***
	age group	0.001	7069	4	4.1	0.003	**
	occupation	0.016	80273	3	62.1	0.000	***
	country	0.005	27635	5	12.8	0.000	***
	residuals		5045569	11718			
Model 3	firm size	0.002	9544	3	7.4	0.000	***
	gender	0.006	32467	1	75.5	0.000	***
	age group	0.001	7162	4	4.2	0.002	**
	occupation	0.015	76513	3	59.3	0.000	***
	country	0.006	31041	5	14.4	0.000	***
	firm size*country	0.003	14589	15	2.3	0.004	**
	residuals		5030980	11703			
Outcome = IJQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	firm size	0.039	76096	3	160.5	0.000	***
	residuals		1871129	11841			
Model 2	firm size	0.061	110162	3	255.8	0.000	***
	gender	0.003	5048	1	35.2	0.000	***
	age group	0.003	5857	4	10.2	0.000	***
	occupation	0.045	79550	3	184.7	0.000	***
	country	0.034	59127	5	82.4	0.000	***
	residuals		1684557	11734			
Model 3	firm size	0.026	44602	3	104.2	0.000	***
	gender	0.003	5189	1	36.4	0.000	***
	age group	0.004	5991	4	10.5	0.000	***
	occupation	0.043	75995	3	177.5	0.000	***
	country	0.019	32265	5	45.2	0.000	***
	firm size*country	0.007	12122	15	5.7	0.000	***
	residuals		1672435	11719			

*p < .05; **p < .01; ***p < .001. Note: All analyses were carried out using Type III Tests.
Source: author's elaboration from ECCTS 2011.

5.3 All factors considered

It is of interest to have a full idea of which socio-demographic or occupational characteristics contribute more to explain the gaps in job quality at the individual level. With that in mind, I fitted three multi-variate ANOVA models – on earnings, WTQ and IJQ – including all the predictors together and controlling by country. I then compared the partial eta-squares associated to each predictor. For ease of interpretation, Figure 5.19 illustrates the partial eta-square in the form of bars.

First, Table 5.9 shows the ANOVA results of monthly earnings (log) on gender, age group, educational level, ethnicity, residence zone, industrial sector, firm size and country (occupation was excluded to avoid an endogeneity problem with education). When all demographic and work-related characteristics were considered together, the greatest part of the variability in earnings was explained by the educational level and firm size; both factors yielding a partial eta squared of .047 ($p < 0.001$), with the country of residence also playing a major role, as expected (*partial* $\eta^2 = .079$, $p < 0.001$).

A similar type of results is shown for WTQ. The predictor variables included in this case were all the same as for earnings, but occupation was used instead of educational level because it was considered a stronger predictor of WTQ. Sociodemographic effects remained rather small in magnitude, but occupation (*partial* $\eta^2 = .01$, $p < 0.001$) and gender (*partial* $\eta^2 = .007$, $p < 0.001$) stand out with larger effects. Holding all other factors constant, high skilled blue collar workers have significantly worst WTQ than high skilled white collar; and women have a mean WTQ significantly higher than men. WTQ showed no significant association with the type of residence area, and a relationship with the type of industry only significant at the 95% confidence level.

Considering the same predictor variables, the last section of Table 5.9 shows that the largest part of the variability in IJQ was explained by the size of the firm (*partial* $\eta^2 = .043$, $p < 0.001$), and then by workers' occupation (*partial* $\eta^2 = .038$, $p < 0.001$). As we pointed out earlier, the larger the establishment, the worse are the intrinsic features of those jobs. Likewise, lower occupational gradients are associated with poorer quality jobs, all things constant.

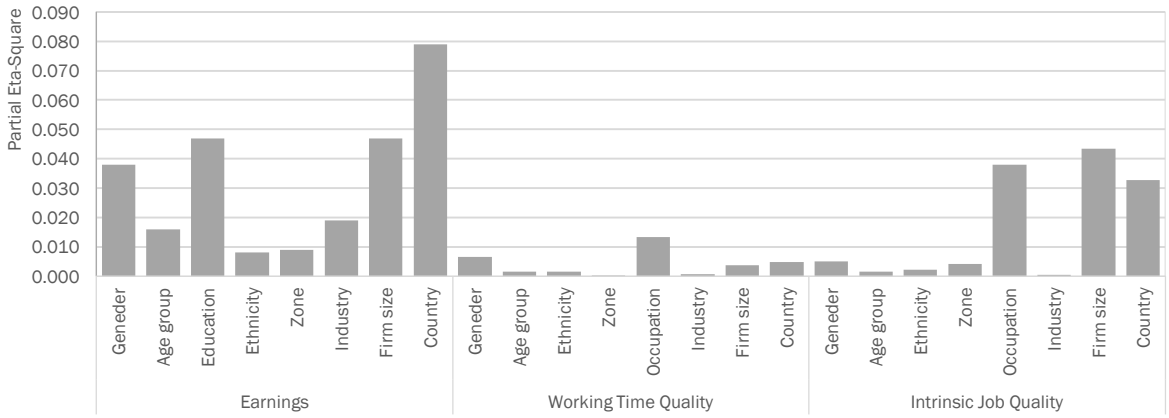
The factors considered together, explained 33% of the variability in monthly earnings, less than 3% of the variability in WTQ, and around 13% of the variability in IJQ. Just as the results show, it was not expected that any of these models yielded a large R^2, since it is not possible to predict how good or bad a job will be only by considering a simple set of workers or job characteristics. Given that the analysis draws on individual survey data, there will be many other variables expected to play a role in JQ variations, and yet not possible to control for. However, for purposes of policy recommendation and intervention, the observed R^2 are significant enough to be aware that there are even small differences that can be worthwhile to remove from a public policy perspective.

Table 5.9. ANOVA results with earnings, IJQ and WTQ as outcomes

Outcome = log (earnings)	SS	df	*F*	Pr(>F)		partial η^2
Gender	26.80	1	410.2	<0.001	***	0.038
Age group	11.00	4	41.9	<0.001	***	0.016
Education	32.90	2	251.7	<0.001	***	0.047
Ethnicity	5.40	2	41.5	<0.001	***	0.008
Zone	6.20	1	94.6	<0.001	***	0.009
Industry	12.90	2	98.9	<0.001	***	0.019
Firm size	33.20	3	169.3	<0.001	***	0.047
Country	57.40	5	175.8	<0.001	***	0.079
Residuals	669.40	10253				
Outcome = WTQ	SS	df	*F*	Pr(>F)		partial η^2
Gender	31781.0	1	74.0	0.000	***	0.007
Age group	7189.0	4	4.2	0.002	**	0.001
Ethnicity	7169.0	2	8.3	0.000	***	0.001
Zone	140.0	1	0.3	0.568		0.000
Occupation	65232.0	3	50.6	0.000	***	0.013
Industry	2813.0	2	3.3	0.038	*	0.001
Firm size	17752.0	3	13.8	0.000	***	0.004
Country	22984.0	5	10.7	0.000	***	0.005
Residuals	4796555.0	11171				
Outcome = IJQ (abbreviated)	SS	df	*F*	Pr(>F)		partial η^2
Gender	8171.0	1	56.1	0.000	***	0.005
Age group	2421.0	4	4.2	0.002	**	0.001
Ethnicity	3488.0	2	12.0	0.000	***	0.002
Zone	6897.0	1	47.4	0.000	***	0.004
Occupation	64377.0	3	147.3	0.000	***	0.038
Industry	758.0	2	2.6	0.074	.	0.000
Firm size	73829.0	3	169.0	0.000	***	0.043
Country	55127.0	5	75.7	0.000	***	0.033
Residuals	1629265.0	11187				

Note: *p < 0.05; **p < 0.01; ***p < 0.001. All ANOVA were carried out using Type III Tests. The IJQ is in its abbreviated version, which excludes occupation and education components.
Source: author's elaboration from ECCTS 2011.

Figure 5.19. Effect sizes of socio-demographic factors on Earnings, WTQ and IJQ (partial η2)



Source: author's elaboration based on Table 5.9.

5.4 Association between job quality and informality

For many decades, Latin American policy makers and international experts have placed their efforts – perhaps fruitlessly – in reducing informal labour because it is thought to be an indicator of unproductive markets and poor working conditions. In an opposite direction, in Chapter 2 we discussed how these forms of employment have been promoted as a value of entrepreneurship and agency, necessary for progress. Central American countries have not escaped to these contradictory landscapes, with rocketing figures of self-employment and formal salaried employment becoming evidently more precarious than it used to be.

Attempting to capture this wide spectrum of labour situations, informality measures have turned out increasingly complex, sometimes even inextricable – as exemplified in Hussmanns' matrix[82] – with limited capacity to establish international comparisons and guide policy decisions. More importantly, as argued in Chapter 2, typical informality indicators seem unsuccessful at capturing how good or bad jobs are from an objective and human-centred perspective.

In this section I aim to corroborate whether the different indicators of informality defined in Chapter 4 – 'informal sector' and 'informal employment' – are significantly related to the quality of jobs. In short, if such association was true, we would expect that the distribution of bad quality jobs matches that of informal jobs and that there was a clear divide with the so-called formal jobs.

5.4.1 JQ and work in the formal sector

To explore whether informality, measured as work in the 'informal sector', was associated with JQ, I first tested the difference in means between formal and informal sector. Then, with the purpose of providing a more complete graphic description, I juxtaposed the distributions of JQ by formal/informal sector type (Figure 5.20). Next, I added demographic and country control factors to check whether there were large changes in the effect sizes between the bi-variate and multi-variate ANOVA (Table 5.10).

Initially, the one-way ANOVA demonstrated that working in the underground sector of the economy was related to lower earnings on average, but same quality of working time and better intrinsic job features, than working in the formal sector. The differences in WTQ were unnoticeable because, as it

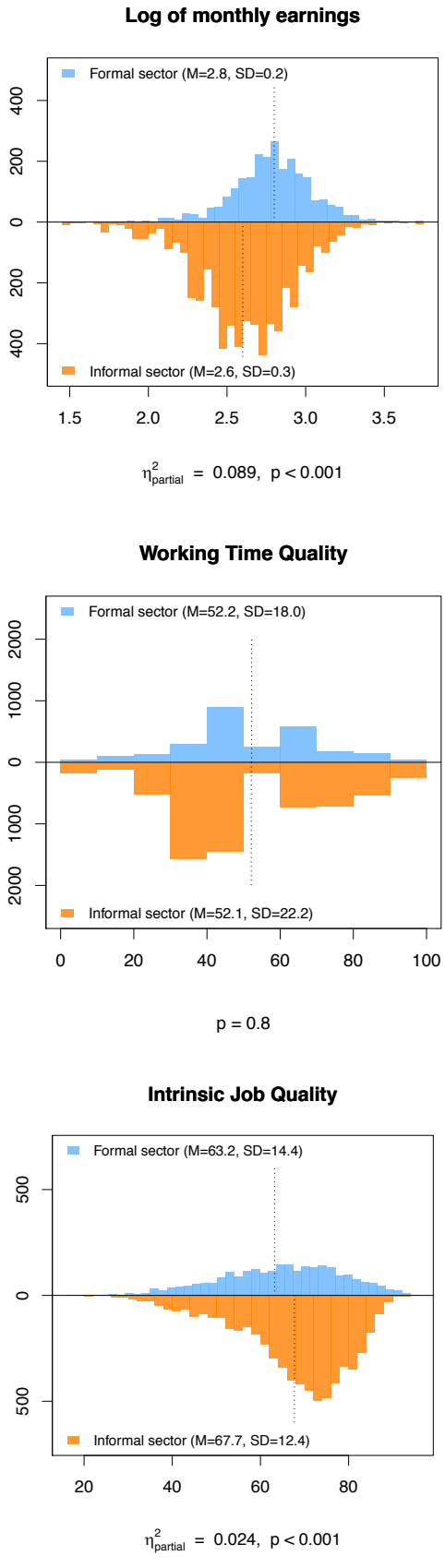
[82] Ralf Hussmanns, former ILO official, proposes to measure the various types of informality through a building-block or matrix approach that breaks down total employment according to the type of production – on the rows dimension – and type of job – on the columns dimension. "Type of production unit is defined in terms of legal organisation and other enterprise-related characteristics" distinguishing between 3 categories: formal sector enterprises, informal sector enterprises, and households. While "type of job is defined in terms of status in employment and other job-related characteristics", distinguishing 5 categories: own-account workers, employers, contributing family workers, employees, and members of producers' cooperatives. In turn, each one of the latter 5 categories is split into formal and informal workers, generating a total of 30 different classification cells. For a detailed explanation of the matrix, see Hussmanns (2005).

was found looking at the sub-components of this index, workers in the formal sector tend to score low in the item about control of working time, but high on the quality of schedules, thus producing a nullifying effect. A closer look into the components of the IJQ index revealed that individuals in the formal sector worked in significantly poorer social environments and in more intense jobs. Whereas differences in the quality of the physical environment, and on skills and autonomy were imperceptible. Such results provide more evidence of the blurred association between bad quality jobs and informality when measured from a productive approach.

Figure 5.20 shows that under both formal and informal types of sector, workers in Central America experienced varying levels of earnings, WTQ and IJQ, even if the means indicated significant differences in terms of earnings and IJQ at the beginning. The distribution of both sectors overlapped considerably, establishing that there is no clear divide between formal and informal sector when it comes to multidimensional JQ.

Moreover, there were noticeable changes in the magnitude of the differences after controlling for gender, age, occupation and country; all of which provides stronger support to debunk the "formal = good jobs" equivalence. First, the positive economic effect of working in the formal sector reduced in magnitude from *partial* η^2 = .089 to .054 (p < .001). Put differently, if workers in the informal sector first appeared to earn 69% of the salary of formal workers in US$, this gap reduced to 81% after accounting for other factors. Second, the effect on WTQ became significant, even if small (*partial* η^2 = .001, p< .001), with those in the formal sector reporting lower WTQ. Third, the negative effect of formality on IJQ increased in size from *partial* η^2 = .024 to .04 (p< .001).

Figure 5.20. Central America 2011: Distribution of monthly earnings, IJQ and WTQ by type of sector (formal vs. informal sector)



Source: author's elaboration from ECCTS 2011.

Table 5.10. ANOVA results for earnings, WTQ and IJQ, with type of sector (formal/informal) as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	sector informality	0.089	64	1	743.6	0.000	***
	residuals		660	7650			
Model 2	sector informality	0.054	31	1	429.3	0.000	***
	gender	0.045	25	1	353.3	0.000	***
	age group	0.011	6	4	21.0	0.000	***
	occupation	0.013	7	3	33.1	0.000	***
	country	0.109	66	5	184.1	0.000	***
	residuals		542	7550			
Model 3	sector informality	0.015	8	1	114.1	0.000	***
	gender	0.044	25	1	350.1	0.000	***
	age group	0.011	6	4	21.5	0.000	***
	occupation	0.013	7	3	33.5	0.000	***
	country	0.044	25	5	69.2	0.000	***
	sector informality*country	0.003	2	5	4.3	0.001	***
	residuals		540	7545			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	sector informality	0.000	30	1	0.1	0.800	
	residuals		3916452	8394			
Model 2	sector informality	0.001	5204	1	11.4	0.001	***
	gender	0.006	23120	1	50.9	0.000	***
	age group	0.000	1473	4	0.8	0.519	
	occupation	0.016	60392	3	44.3	0.000	***
	country	0.010	39826	5	17.5	0.000	***
	residuals		3769608	8291			
Model 3	sector informality	0.001	3225	1	7.1	0.008	**
	gender	0.006	22668	1	50.0	0.000	***
	age group	0.000	1574	4	0.9	0.483	
	occupation	0.016	60537	3	44.5	0.000	***
	country	0.000	1558	5	0.7	0.633	
	sector informality*country	0.003	10482	5	4.6	0.000	***
	residuals		3759126	8286			
Outcome = IJQ (abbreviated)							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	sector informality	0.024	37100	1	209.0	0.000	***
	residuals		1491953	8405			
Model 2	sector informality	0.040	55029	1	345.7	0.000	***
	gender	0.006	7947	1	49.9	0.000	***
	age group	0.006	7746	4	12.2	0.000	***
	occupation	0.058	81453	3	170.6	0.000	***
	country	0.029	39669	5	49.8	0.000	***
	residuals		1321501	8302			
Model 3	sector informality	0.014	18672	1	117.4	0.000	***
	gender	0.006	8072	1	50.8	0.000	***
	age group	0.006	7909	4	12.4	0.000	***
	occupation	0.058	80808	3	169.4	0.000	***
	country	0.013	17042	5	21.4	0.000	***
	sector informality*country	0.002	2364	5	3.0	0.011	*
	residuals		1319137	8297			

*p < .05; **p < .01; ***p < .001. Note: All analyses were carried out using Type III Tests.
Source: author's elaboration from ECCTS 2011.

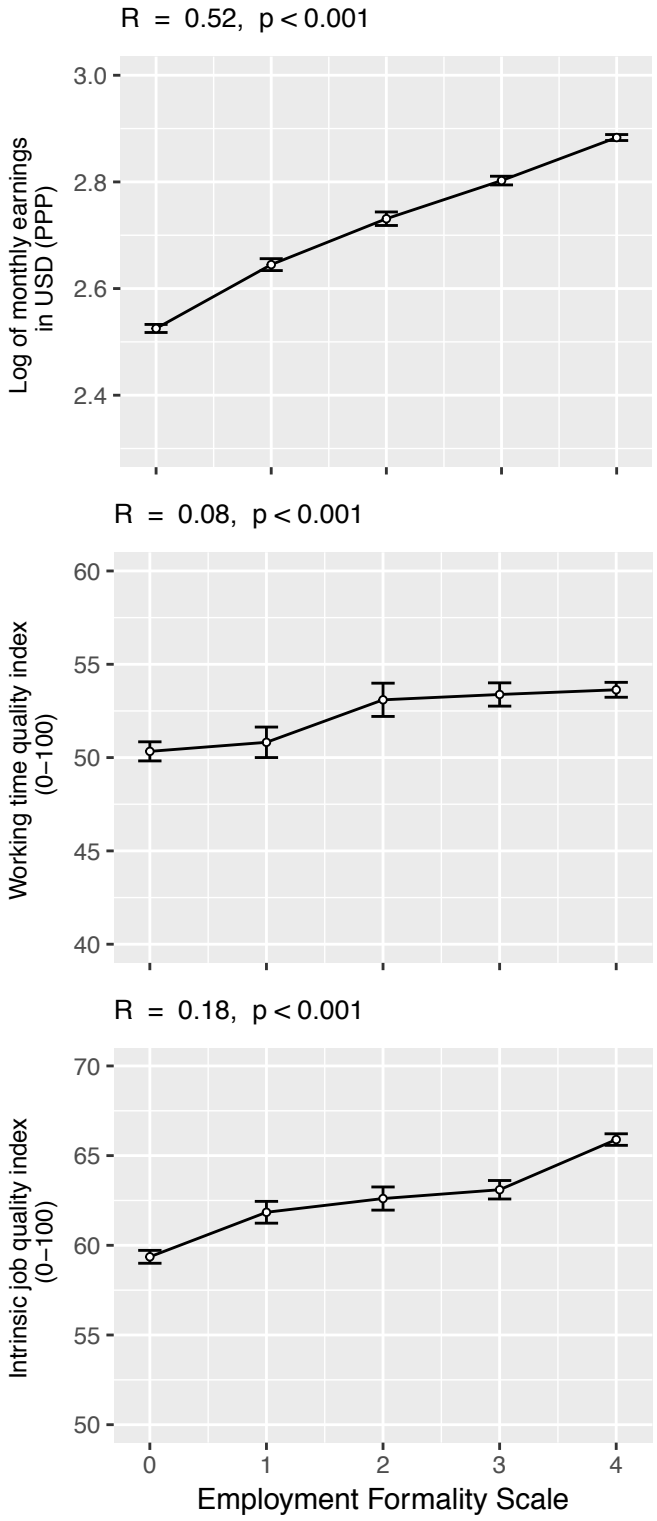
5.4.2 JQ and formal employment

The same analysis was done using the ordinal scale for formality of employment as the predictor of interest. At first sight, Figure 5.21 suggests that, when measuring formality in terms of employees' access to rights, being formally employed appears to be positively associated with JQ in all dimensions of the concept: higher average income, IJQ and WTQ. The positive association with earning was the strongest of all. Of note, the apparently higher WTQ of those formally employed was explained by their better working shifts and more short-time flexibility to ask for time off for personal reasons. But their long-term autonomy to decide their schedules was significantly lower than employees in informal arrangements. Also, where protected employment showed virtually better IJQ, it was essentially due to their higher degree of control, a safer physical and social environment, but intensity was better for informal employees.

However, the analyses of variances presented in Table 5.11 indicated that once the effects of gender, age, occupation and country are factored in, being formally employed in Central America kept having a positive and large main effect on earnings (η^2_p= .190, p <.001), but the associations with WTQ and IJQ were no longer significant at the 99.9% confidence level.

To make this point stronger, Figure 5.22 plots the juxtaposed histograms of JQ for workers at both extremes of the formality scale, that is, those in the most formal arrangements (value 4), and workers in the most informal relationships (value 0). The result obtained was similar to the case of informality when measured as type of sector in the sense that, although JQ means between both groups differ significantly, the distributions overlap greatly.

Figure 5.21. Average monthly earnings, IJQ and WTQ, by formality of employment relationship



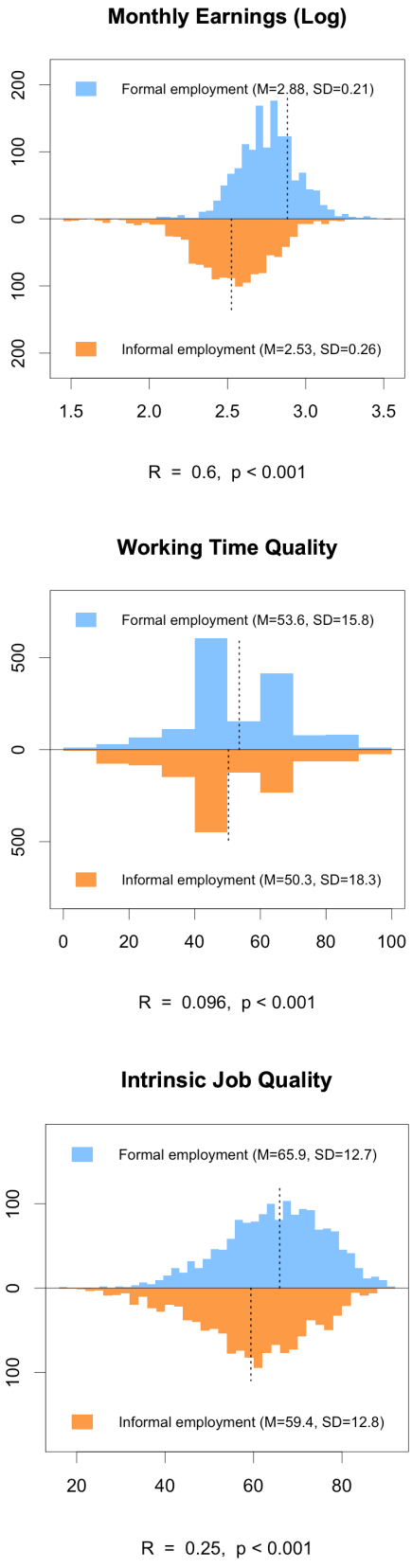
Source: author's elaboration from ECCTS 2011.

Table 5.11. ANOVA results for earnings, WTQ and IJQ, with type of employment (formal/informal) as main predictor

Outcome = EARNINGS							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	employment formality	0.275	91	1	1640.1	0.000	***
	residuals		240	4334			
Model 2	employment formality	0.190	46	1	991.5	0.000	***
	gender	0.036	7	1	156.4	0.000	***
	age group	0.009	2	4	9.3	0.000	***
	occupation	0.022	4	3	31.4	0.000	***
	country	0.119	26	5	114.0	0.000	***
	residuals		197	4233			
Model 3	employment formality	0.058	12	1	261.9	0.000	***
	gender	0.036	7	1	158.1	0.000	***
	age group	0.009	2	4	9.7	0.000	***
	occupation	0.021	4	3	30.1	0.000	***
	country	0.038	8	5	33.1	0.000	***
	employment formality*country	0.003	1	5	2.7	0.021	*
	residuals		196	4228			
Outcome = WTQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	employment formality	0.007	9473	1	31.4	0.000	***
	residuals		1425398	4722			
Model 2	employment formality	0.001	1714	1	5.9	0.015	*
	gender	0.005	7181	1	24.7	0.000	***
	age group	0.001	1214	4	1.0	0.382	
	occupation	0.022	30365	3	34.9	0.000	***
	country	0.008	10502	5	7.2	0.000	***
	residuals		1341349	4619			
Model 3	employment formality	0.006	8036	1	28.0	0.000	***
	gender	0.006	7430	1	25.9	0.000	***
	age group	0.001	1343	4	1.2	0.322	
	occupation	0.022	29856	3	34.6	0.000	***
	country	0.008	11320	5	7.9	0.000	***
	employment formality*country	0.012	15724	5	10.9	0.000	***
	residuals		1325625	4614			
Outcome = IJQ							
	Source of variation	*partial* η^2	*SS*	*df*	*F value*	*Pr(>F)*	
Model 1	employment formality	0.034	29455	1	168.0	0.000	***
	residuals		828072	4723			
Model 2	employment formality	0.001	644	1	4.3	0.037	
	gender	0.001	423	1	2.9	0.091	
	age group	0.003	2387	4	4.0	0.003	**
	occupation	0.110	84756	3	190.4	0.000	***
	country	0.043	30598	5	41.2	0.000	***
	residuals		685416	4620			
Model 3	employment formality	0.001	387	1	2.6	0.106	
	gender	0.001	508	1	3.4	0.064	
	age group	0.003	2336	4	3.9	0.003	**
	occupation	0.110	84497	3	190.2	0.000	***
	country	0.015	10364	5	14.0	0.000	***
	employment formality*country	0.003	2127	5	2.9	0.014	*
	residuals		683289	4615			

*p < .05; **p < .01; ***p < .001. Note: All analyses were carried out using Type III Tests.
Source: author's elaboration from ECCTS 2011.

Figure 5.22. Central America 2011: Distribution of monthly earnings, IJQ and WTQ by type of employment (formal vs. informal)



Source: author's elaboration from ECCTS 2011.

5.5 Summary

The first point to highlight from the results presented in this chapter is that the patterns of JQ obtained in Central America after implementing Eurofound's measures look reasonable and realistic enough as to be confident of their validity at the individual level. Precisely, the purpose of the descriptive exercise undertaken was to check if the differences or similarities between demonstrative groups of workers were anchored to reality. To cite an example, the relatively better economic features of the jobs performed by men, skilled workers, from urban zones, and large firms made strong sense regarding what we know about pay disparities in most contexts. Likewise, the better intrinsic quality enjoyed by professional workers in small enterprises is highly consistent with usual expectations. Even considering the diversity of countries analysed here, the distribution of good and poor working conditions across illustrative types of workers was credible.

There were a few situations in which the results were puzzling. For instance, no simple explanation is found for the low gender pay gaps in Honduras and Nicaragua, even though the results closely replicate the information gathered in other official sources. Likewise, the association between WTQ and factors like age, the zone of residence or industry sector was not as marked as found for other regions. Although further research is needed, the latter may be indicative of a compensating effect occurring between the components of the WTQ index that makes the aggregated effect somewhat null. Nevertheless, it may also be the case that jobs in Central America are not yet significantly differentiated concerning the quality of working time.

The previous idea takes us to another point worth emphasising from the results obtained. At the individual level, it has been demonstrated that jobs can be of good quality in some dimensions, but worse in others. For instance, when comparing men and women, the former had a much better quality of earnings on average but performed significantly worse regarding the quality of the physical environment. In other words, what is lost for workers in some respects, is often made up for on other aspects of work, which makes it more of a 'swings and roundabouts' balanced situation. That being said, there were a few groups that behaved more consistently in the accumulation of amenities: for instance, highly educated workers tend to have good jobs in every sense of the concept. If we were to define the "truly bad job" as one which is low on all three dimensions, or the "perfect job" as one which is high on all three dimensions of JQ, it is likely that we would find rather small proportions of the sample falling in each of those archetypal categories. On the whole, these results confirm what Green and others have pointed out: specifically, that there is not one, but many measures of what a good job looks like. In this particular case, we have analysed at least three ways to identify the quality of Central American jobs: in terms of earnings, WTQ and IJQ.

In this same line, the results regarding the distribution of JQ across a range of formal and informal types of work must be discussed as a third and final point. Against common stereotypes, we demonstrated that the line between the formal/informal divide becomes somewhat blurred when we consider more features of the job other than salaries. It was observed that the distributions of JQ between formal and informal work arrangements overlap considerably, thus confirming that in Central America there is not a ubiquitous association between formal jobs and good working conditions.

The heterogeneity of working conditions found in the formal and informal types of work contests both dualist and legalist theories of informality. On the one hand, the 'productive' conceptualisation of informality – based mainly on firm size – did not lead to the identification of two opposing labour markets. There was not an informal sector that was simultaneously characterised by low pay, high intensity and low autonomy; as opposed to a more modern sector defined by good job quality in all dimensions of the term. The differences in WTQ between formal and informal sectors were rather not noticeable. Moreover, the ECCTS data suggested that the informal sector is characterised by lower relative income but higher IJQ at the same time. These results are more in line with the theories of multi-segmented markets or those that understand informality as a continuum (Chen et al., 2006). They are also consistent with recent studies which claim that some workers in formal settings are exposed to precarious working conditions in some aspects, while some informal workers enjoy relatively good quality conditions of work (Ferreira, 2016; Günther & Launov, 2006; Jütting et al., 2008; Phillips, 2011).

On the other hand, the variability of JQ found both in the most formal and informal types of employment also challenges the assumptions made by legalist neoliberal theorists, in that the association between 'voluntary' informal employment and better JQ was not empirically supported either. In some countries of the isthmus, resignation to traditional protections associated to formal employment like the ownership of a labour contract, social security and pension contributions, is still related to having some bad job features, such as higher exposure to physical hazards, lower autonomy and worst schedules. Therefore, even if informality is not prejudicial in all dimensions, there are no solid grounds either to promote self-employment, relaxation of employment regulations or the shrinking of the protective role of states, under the simplistic rhetoric of the value of 'entrepreneurship', 'risk-taking', or 'growth-oriented self-employment'. Differently, the observed data implies that in Central America there is still a great deal of constraint, involuntary exclusion and survival strategies driving informality.

It must be called to attention that because of practicalities, the prospects index had to be omitted in this study. Had the data been available, it is likely that the results would have shown more notable JQ disparities between formal and informal employment. As defined in Eurofound's report (2012), the prospects dimension of JQ refers to the job's ability to meet people's needs for employment. The index proposed by Green and colleagues combines features like job security, career advancement and contract status. As such, the prospects dimension is much closer to a concept of 'employment formality' because

it covers some of those material and non-material securities from work. However, as the very authors point out, the type of contract should be interpreted only as a proxy of the possibilities for job continuity, in that some forms of indefinite or temporary contract do not have the same legal or practical implications in every country. Weller & Roethlisberger (2011, p. 60) argue that in Latin America the labour contract is a paramount instrument to secure workers' access to social security systems of health, pension and the payment of end-of-year bonuses. Similarly, in Central America, the ownership of a labour contract resulted significantly associated with these benefits. The key question, however, is whether such benefits ought to be considered intrinsic job aspects under the approach here followed. Many experts, Sen included, have argued that regardless their importance for well-being, the availability of health and pension securities is more a characteristic of the market environment and state welfare model than anything.

There was an important exception to the heterogeneous relationship found between formality and JQ: irrespective of how is measured, working in the informal sector or being more informally employed was persistently and strongly associated with lower monetary returns. This finding is certainly worth taking into account for policy purposes: that informality in Central America is generally a good indicator of lower earnings. However, it also supports the claim that informality statistics, as commonly used by authorities, are only a rough proxy for JQ because they do not tell much about other job aspects in which improvement efforts should be focused as well. As currently observed, the formal/informal dichotomy is only sustained by its direct association with the level of salaries.

Green and Mostafa's indices allowed to unpack this simplistic dichotomy incorporating multiple dimensions of the working life in the measure of JQ. In a context where informality has taken sizeable dimensions and did not appear to retract, these results help to unravel the blurred relationship between formality and good jobs, while reinforces the practical advantages of implementing the capability approach in the field of labour market policies.

6 Can we measure which *countries* perform best?

As other JQ studies have pointed out, one of the biggest gains of a composite measure of this kind is to evaluate and compare JQ averages among different Central American countries, ideally including other countries of other world regions as well. Understanding what works and what does not work in other countries can be of critical importance, especially for the policymaking field (Hantrais, 2009). There is an ongoing debate on just how feasible and useful is to compare development outcomes across contexts with such dissimilar socioeconomic and institutional backgrounds. The very ILO has argued that international comparisons of decent work are not desirable. On the contrary, other researchers have adopted a more supportive stance towards international comparisons through synthetic indicators (e.g. Santos & Santos, 2014), particularly in the field of JQ (Piasna et al., 2017; Sehnbruch et al., 2015).

At this stage of the research, I endeavour to make a case for international comparative measures of JQ in Central America. The chapter is structured into four specific questions. First, does Green and Mostafa's methodology allow us to estimate differences in countries' capacity to provide good jobs? Second, are the observed differences with countries outside Central America in accord to theory or stylised reality as to validate our indices? Third, do countries perform similarly in every dimension of JQ? And fourth, are the observed differences or similarities between the countries of the isthmus plausible in light of their structural characteristics and institutional capacities? We pay special attention to the role played by labour legislation, state vigilance, workplace inspection, and trade unions in explaining countries average performance in JQ.

A one-off survey with only six country cases does not fully allow us to explore the causes of cross-country variations, nor the dynamic of these differences in a sound statistical way. However, by identifying international disparities, and ruling out the possibility that they are explained by compositional characteristics, we could very well be in a position to distinguish which systematic differences in JQ should be a policy target. Then, the extended institutional analysis is done to interpret such results in context.

6.1 Job Quality across the isthmus

Despite that within-country variations on JQ can be considerable, as shown in Chapter 5, it is known that the average quality of earnings, prospects, working-time, and intrinsic job characteristics also can fluctuate significantly *between* countries (Eurofound, 2012). With the purpose of determining if Green and Mostafa's scales can also capture the differences in JQ across Central American nations, I used the 2011 ECCTS data to compute the mean scores of earnings, WTQ and IJQ by country. Then, I estimated the size of the country effect (partial eta-squared) on each JQ dimension. In order to set a standard guideline for comparisons, the figures that follow display the list of countries organised from left to right in decreasing order of per capita GDP (current US$, PPP) as by 2011, namely: Panama, Costa Rica, El Salvador, Guatemala, Honduras and, lastly, Nicaragua as the poorest country[83]. Additionally, because employees may show a very distinct pattern to self-employed workers, all figures were disaggregated by employment category.

6.1.1 Ranking countries by earnings level

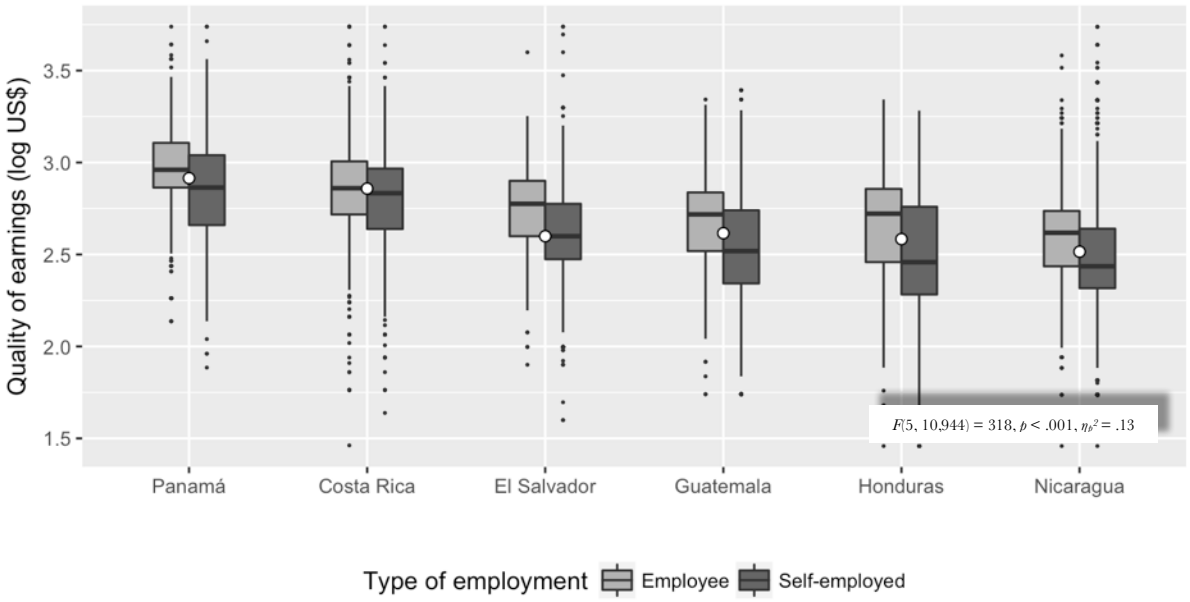
Boxplots in Figure 6.1 show the distribution of the quality of earnings in each country, by type of employment, for 2011.[84] As anticipated, the rank order of countries in terms of median quality of monthly earnings (represented by the white dots) was closely associated to their relative economic performance. Jobs in Panama and Costa Rica were by far the best paid in the isthmus with a median monthly pay of US$822 and US$722 respectively. On the contrary, workers in Nicaragua were the worst paid with a median of US$327 per month; less than half the level of Panama. The ranking remained unaffected after looking at the medians of employees and self-employed separately.

Unsurprisingly, the country effect on earnings was large, $F(5, 10944) = 318$, $p < .001$, *partial* $\eta^2 = .127$. Another way to illustrate the magnitude of such differences is by looking at the proportions of low-paid jobs in each nation, defined as the percentage of workers that earn below two-thirds of the mean wages of all workers. If we used such a definition (which is similar to OECD's estimation of low-paid jobs), the proportion of low-pay jobs would have gone from 26% in Panama, to 30% in Costa Rica, 35% in El Salvador, 40% in Guatemala, 42% in Nicaragua, and up to 45% in Honduras.

[83] As reported by the World Bank (2018).

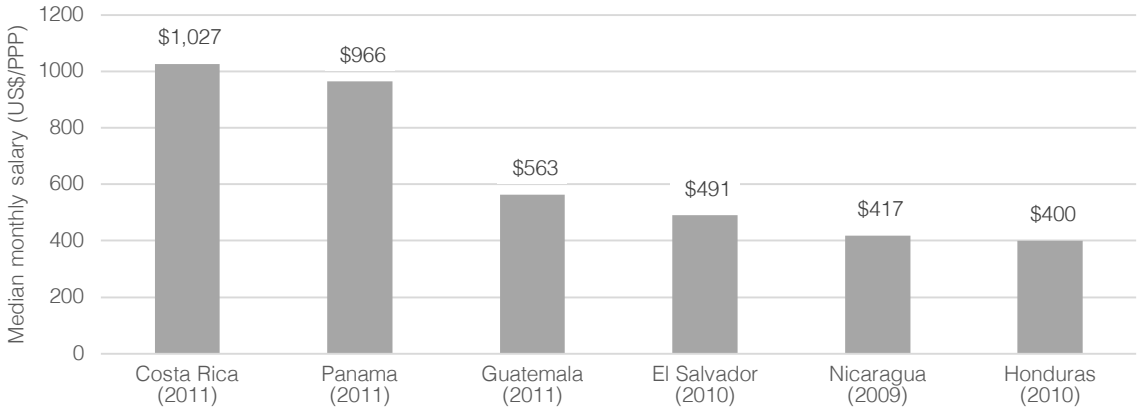
[84] The definition of boxplots used in this study follows that of Tukey (1977): they display the median (horizontal line), the first and third quartiles (lower and upper hinges), and the whiskers extend from the hinge to the largest/smallest value no further than 1.5 * IQR from the hinge (IQR stands for inter-quartile range). Outliers are represented by the dark dots beyond the end of the whiskers. The total country medians of monthly salary (i.e. including employees and self-employed) are plotted as white dots in between boxes.

Figure 6.1. Log of monthly earnings by country and type of employment (US$ PPP)



Note: white circles represent the country's median.
Source: author's elaboration from ECCTS 2011.

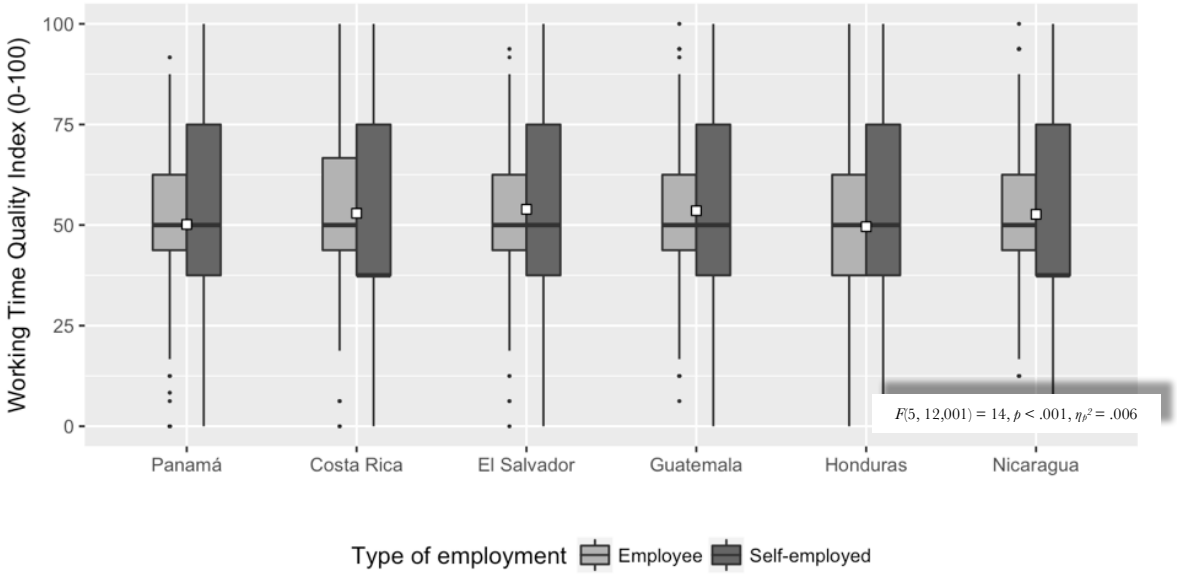
Figure 6.2. Central America circa 2011: ECLAC's tabulations of median monthly salary by country (US$, PPP)



Source: author's elaboration based on ECLAC's special tabulations from household surveys (upon request to Jürgen Weller, Head of Employment Studies Unit, Economic Development Division, on 27 May 2017).

Given that the countries of the isthmus have notable differences in GDP per capita as demonstrated in Chapter 3, and that GDP has a direct impact on the level of wages in a country, the resulting ranking appears credible. Moreover, such ranking was validated against the figures on median income of the employed population tabulated by ECLAC, on the basis of household surveys, around the same year of the ECCTS. Figure 6.2 shows ECLACS' country ranking, which is similar to the one we obtained: Costa Rica and Panama remain at the top, followed by far by Guatemala and El Salvador, and Nicaragua and Honduras in the last two places.

Figure 6.3. Working Time Quality Index by country and type of employment (0-100)



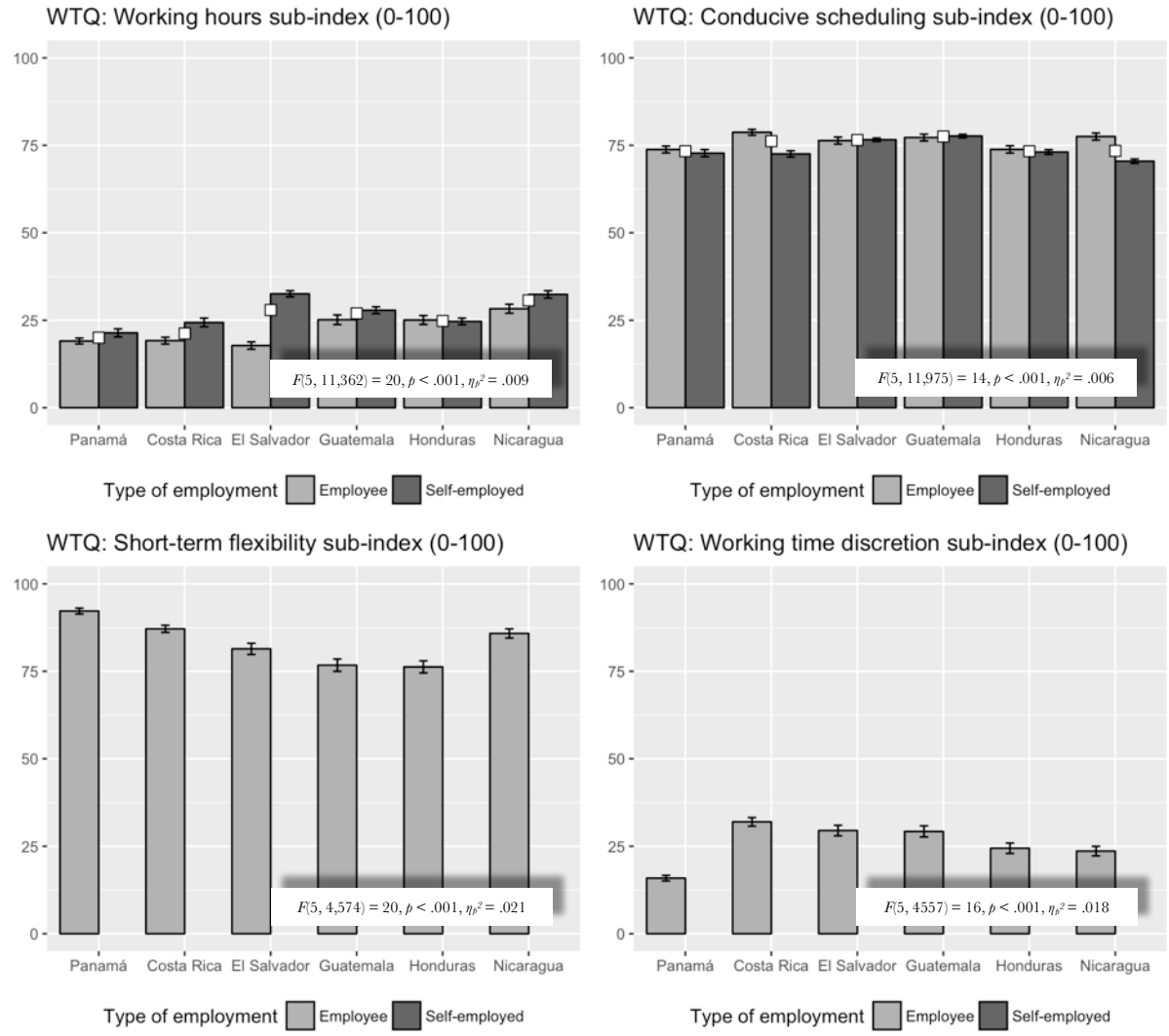
Note: white squares represent the country's mean.
Source: author's elaboration from ECCTS 2011.

6.1.2 Ranking countries by Working Time Quality

The cross-national variation in the mean quality of working time was very low as indicated by the almost parallel boxplots of Figure 6.3. The means ranged from 49.6 in Honduras to 53.9 in El Salvador. If we focused only on the group of salaried workers, for whom there was more information available regarding WTQ, we would find that Panama and Honduras keep being the worst countries for achieving work-life balance, while Nicaragua and Costa Rica move to the top two countries for employees in this aspect of JQ.

An analysis of variances revealed that differences between countries on this dimension were significant at the 99% confidence level but small in magnitude, $F(5, 12001) = 14.3$, $p < .001$, *partial* $\eta^2 = .006$. In the European analysis undertaken by Muñoz de Bustillo et al. (2011), the working time dimension of JQ also yielded the lowest range of variation between countries. Even though their time index was comprised of somewhat different items to those used in the Central American version, the reason behind the low variation appears to be the same: that the WTQ index is an average of items that usually behave in opposite directions at the country level, cancelling each effect out. For instance, in Figure 6.4 it is observed that countries like Panama and Nicaragua scored high in 'short-term flexibility' but low in 'control over working time'.

Figure 6.4. Working Time Quality components: mean scores by country and type of employment (0-100)

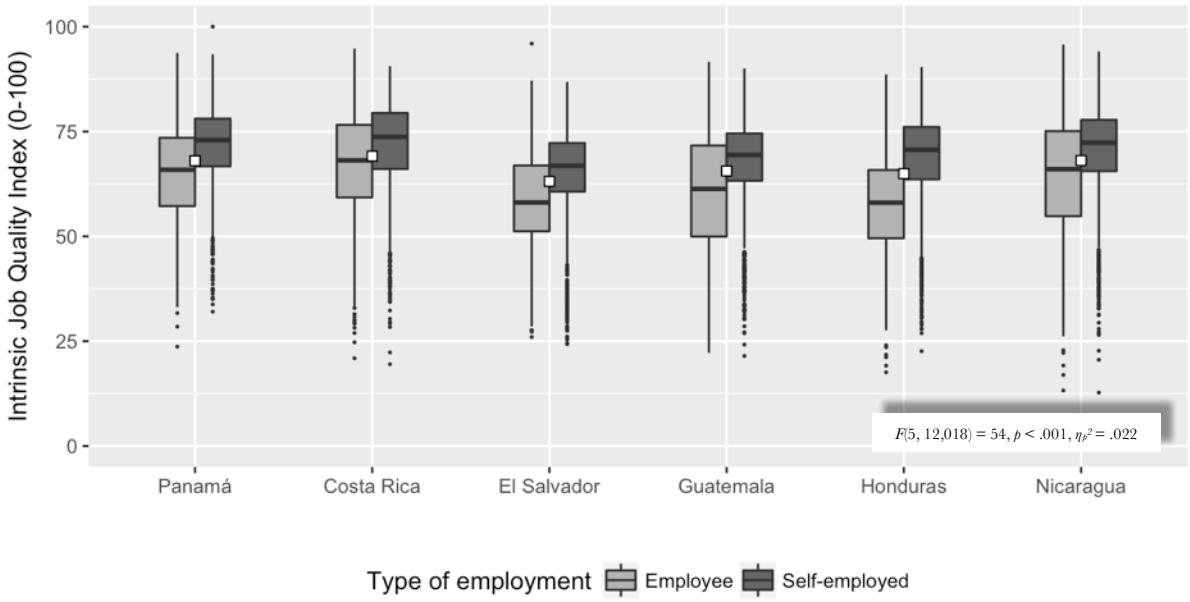


Note: white squares represent each country's mean. The dimensions of short-term flexibility and working time discretion were estimated for employees only, represented by the light grey bars.
Source: author's elaboration from ECCTS 2011.

More illustrative of the fact that countries hardly accumulate all the amenities or disadvantages is that, on the one hand, Panama raises as the most 'inflexible' labour market (with 80% of employees reporting that their schedule was always or many times decided by the employer without possibility of change); and on the other, the same country ranked as the most beneficial environment when it is about asking for a day off to attend family or domestic issues (with 93% of their salaried workers saying that their job did consider such a right).

Apart of this 'compensating' effect, the indicators comprising the WTQ scale also yielded minuscule effect sizes, thus denoting that working time aspects vary only marginally across Central American countries (see Figure 6.4).

Figure 6.5. Intrinsic Job Quality Index by country and type of employment (0-100)



Note: white squares represent the country's mean.
Source: author's elaboration from ECCTS 2011.

6.1.3 Ranking countries by Intrinsic Job Quality

Figure 6.5 shows the distribution of the IJQ index in each country, disaggregated by type of employment. In this occasion, the highest mean IJQ was found in Costa Rica (M=69.1, SD=12.8), while El Salvador recorded the lowest score (M=63.1, SD=12). The overall country effect over intrinsic job features was of medium magnitude, $F(5, 12018) = 54$, $p < .001$, *partial* $\eta^2 = .022$; follow-up tests showed that the only case in which no significant difference was found was between Panama and Nicaragua.

The cross-national ranking remained roughly unchanged when employees and the self-employed were considered separately, even if the former group had a slightly higher range of international variation than the self-employed. It is relevant to notice, that within-country variation of good jobs was also higher among employees than self-employed workers, particularly in Guatemala and Nicaragua (see Box 6.1 for a more detailed analysis of within-country variation of JQ).

According to Figure 6.6, where the IJQ scores are disaggregated into their four components, the better relative performance of Costa Rica, Panama and Nicaragua appears to be associated with physically safer workplaces and – except for Panama – more appropriate work intensity. Indeed, the largest country effects were on the quality of physical environment and work intensity, whereas countries were more similar regarding the average quality of the social environment and in the level of skills and discretion. The position of Panama in work intensity, which is comparable to that of El Salvador and

Guatemala, was unexpectedly low considering its relatively good performance in other JQ dimensions.[85] Considering that previous research has found that the higher the socioeconomic development of a country, the more intense jobs are (Muñoz de Bustillo et al., 2011, p. 218), Panama's high intensity of the work effort is not as surprising as it looked in the beginning. However, the same thesis does not seem applicable to the wealthy Costa Rica, which had the least intense jobs on average.

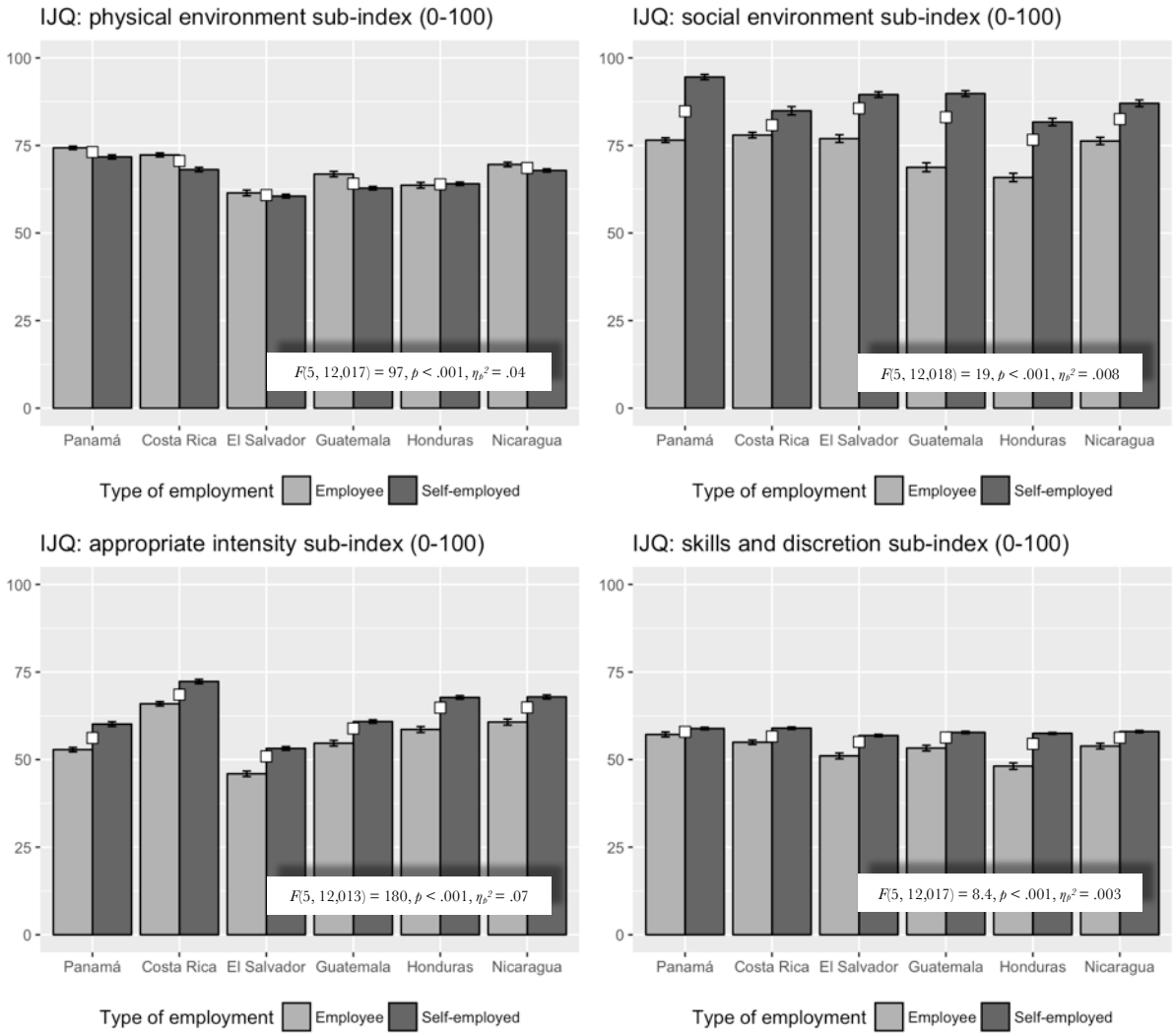
Cross-country variability is lower pertaining the quality of the social environment, as well as in the skills and discretion scale. The only country that slightly departed from the general trend in these dimensions was Honduras, where employees had more unsafe social environments and slightly less control over the work process. Country means in these components of JQ do not follow from their economic performance either. In Eurofound's 2012 report, a lack of clear association was already observed between countries' GDP per capita and the average level of individual discretion in their workplaces showing, for instance, that the UK could rank as low as Romania in terms of autonomy. Regarding the quality of the social environment, other research undertaken in Europe has even suggested the existence of a negative relationship between countries' wealth and psychosocial health at work, assuming that those types of risk are more likely to be found in advanced sectors and occupations (Muñoz de Bustillo et al., 2011, p. 218). Still, it is hard to tell whether such conclusion applies in Central American countries given the low dispersion found in the social environment scale.

Of note, workers generally reported relatively high scores in the social environment sub-index (near 90 on a 0-100 scale); especially self-employed. In Eurofound's 2012 report, it was also found that the exposure to psychosocial risks is typically low at the country level, and by no means related to average economic performance. This may well be an indication of a 'social desirability bias', i.e. the tendency of respondents to under-report negative facts related to work for fear of being judged. It may also reflect a labour market in which workers are less aware of these types of risks or tend to naturalise the exposure to abusive behaviour in the workplace. As it will be further discussed, the absence of strict legislation regarding abuse at work can also contribute to a general lack of awareness and under-reporting.

Ultimately, is it possible that Central American countries differ markedly in terms of earnings, somewhat less in terms of IJQ and very low in terms of WTQ? As commented before, is difficult to elucidate a conclusion by comparing these results to similar analyses carried out in the region, simply because such analyses on multidimensional JQ do not exist in Central American countries. At the very least, we can assert that these results assimilate to those found in the European context for most dimensions, in that countries' capacity to generate 'good jobs' does not necessarily derive from their economic development.

[85] It is worth reminding to the reader that the intensity scale was reversed as to denote high work intensity with low scores (see Chapter 4 on the construction of the indices).

Figure 6.6. Intrinsic Job Quality components: mean scores by country and type of employment (0-100)



Note: white squares represent the country's mean.
Source: author's elaboration from ECCTS 2011.

Box 6.1. A note on JQ distribution within countries

In addition to show how JQ varies between countries, the series of boxplots above also give us a rough idea of how good jobs are distributed 'within' countries: the longer the box and/or whiskers, the more dispersed is JQ within that country. In Figures 6.1, 6.3 and 6.5 this information was given separately for employees and self-employed. A more accurate way to summarise the overall degree of dispersion of the distribution of good jobs within each country is by computing the GINI coefficient, which is bounded between 0 (representing total equality) and 1 (extreme inequality). This measure was computed specifically for each of the three variables here analysed: pay, WTQ and IJQ. Table 6.1 shows that Honduras and Nicaragua not only have the lowest average earnings but also are the most unequal in terms of pay – as indicated by the higher values of their Gini index – while Panama is the most equal of the six countries. These results are not exactly the same as the official figures of inequality provided in Chapter 3, but there is an acceptable match. Interestingly, Honduras also appeared as the most unequal country in terms of WTQ and IJQ.

Table 6.1. Gini coefficients for job quality in Central American countries

	Earnings	WTQ	IJQ
Panama	0.31	0.31	0.21
Costa Rica	0.39	0.32	0.24
El Salvador	0.34	0.26	0.19
Honduras	0.47	0.37	0.31
Nicaragua	0.47	0.35	0.28
Guatemala	0.39	0.26	0.15

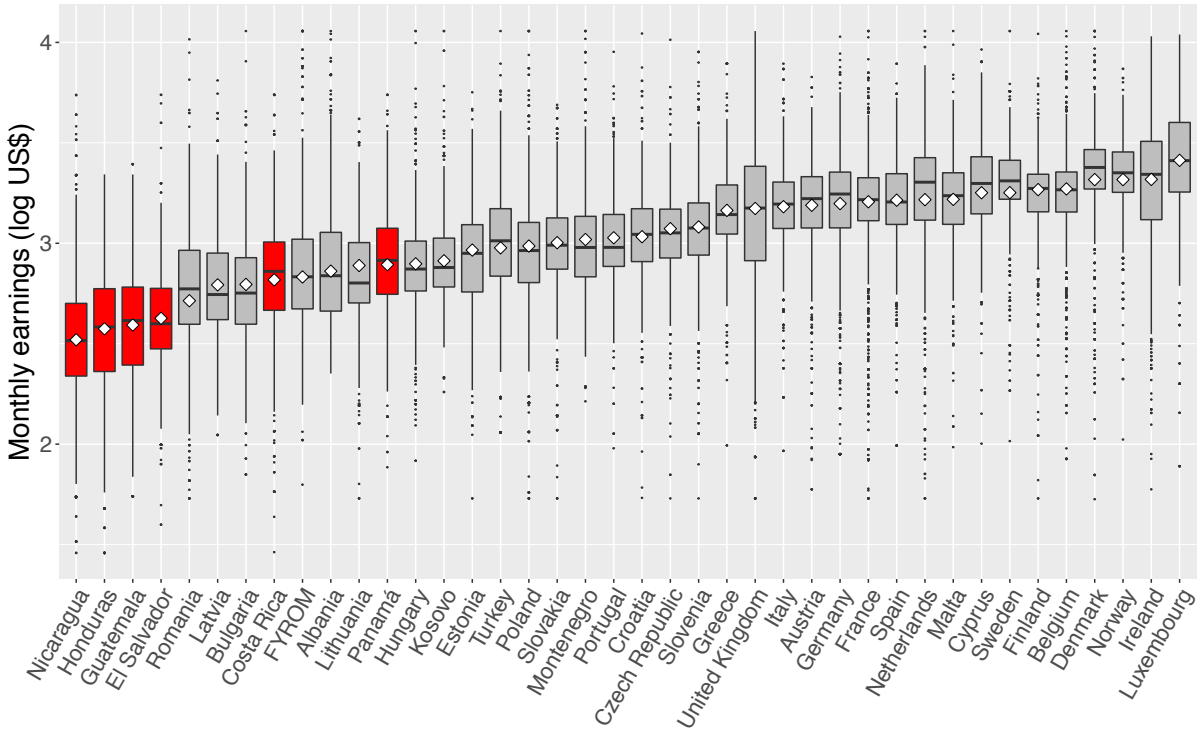
Source: author's analysis from ECCTS 2011 micro-data.

6.2 How would Central American countries rank amongst European nations?

With the purpose of exploring how the six Central American countries would rank within a wider international context, I built a harmonised version of the JQ indices, using the 2010 EWCS and the 2011 ECCTS (see the Appendix for a detailed description of the harmonisation procedure).

It could be argued that comparing working conditions in Central America with those in Europe is substantively or methodologically untenable, being that these are extremely different samples and socioeconomic contexts. Researchers (e.g. Jensen, 2015) have even claimed that it is not possible to make meaningful comparisons of working conditions across the different Central American countries without focusing on specific industries and occupations. Indeed, unlike the EWCS, the 2011 ECCTS post-stratification weighting procedure did not include a variable of economic activity at the sector level, nor the occupation variable at the 1-digit level, because census statistics do not exist at such level of disaggregation in all Central American countries (Benavides et al., 2015). However, in the current study, this obstacle is partly sorted through the inclusion of occupation and industry as control variables in most inferential analyses.

Figure 6.7. Europe and Central America: Log of monthly earnings by country

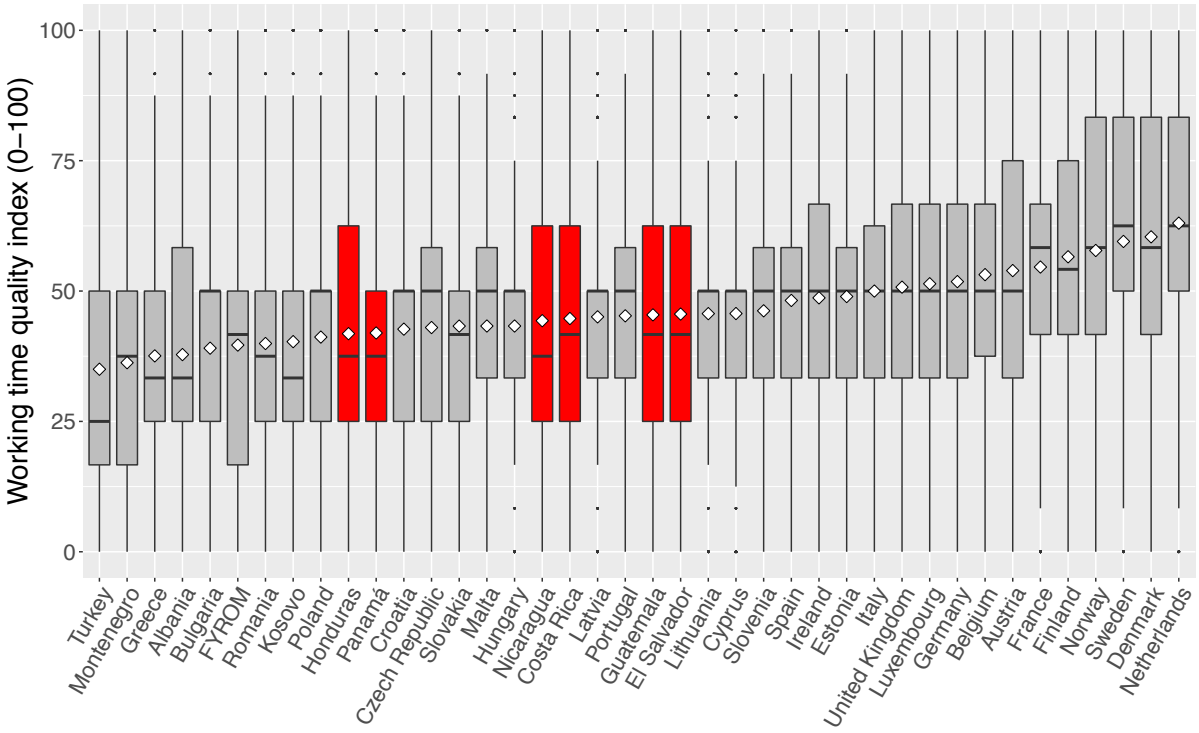


Source: author's elaboration from EWCS 2010 and ECCTS 2011.

One of the main objectives of this study is, precisely, to assess whether it is feasible to apply Green and Mostafa's indices across regions and countries with dissimilar socioeconomic backgrounds and with labour institutions of different capacity provided the data were available. Green and his colleagues already proved that comparing country samples as disparate as Turkey and Sweden is not only possible but useful. Evidently, between Central American and European countries there is as big a gulf as between Turkey and Sweden, or even between Honduras and Costa Rica. Thus, although a number of job features had to be excluded from the comparison for methodological reasons, this exercise represents a first attempt to assess the usefulness of multidimensional JQ indices for global comparative purposes.

Figure 6.7 includes the distribution of the logarithm of monthly earnings across 40 countries (6 Central American and 36 European cases), ranked by their means in ascending order. Therein, it is observed that Nicaragua, Honduras, Guatemala and El Salvador departed notably from the rest of the countries, with national salary averages lower than US$500 per month. Jobs in these four Central American countries showed to be on average worse paid than even the lowest-paid jobs in Europe (e.g. Romania, Latvia, Bulgaria). Within the extended sample, Costa Rica and Panama ranked somewhat better, yet within the lowest third, along with countries like Albania, Republic of Macedonia and Lithuania. Using the harmonised version of the earnings index, the country effect in Europe was: $F(33, 36904) = 267$, $p < .001$, *partial* $\eta^2 = .19$; considerably larger than in Central America, $F(5, 10944) = 318$, $p < .001$, *partial* $\eta^2 = .13$. On a regional scale, the median monthly earnings were significantly lower and more dispersed in Central America (*MD*=2.64, *IQR*=0.40 in log of US$) compared to Europe (*MD*=3.18, *IQR*=0.38).

Figure 6.8. Europe and Central America: Working Time Quality by country

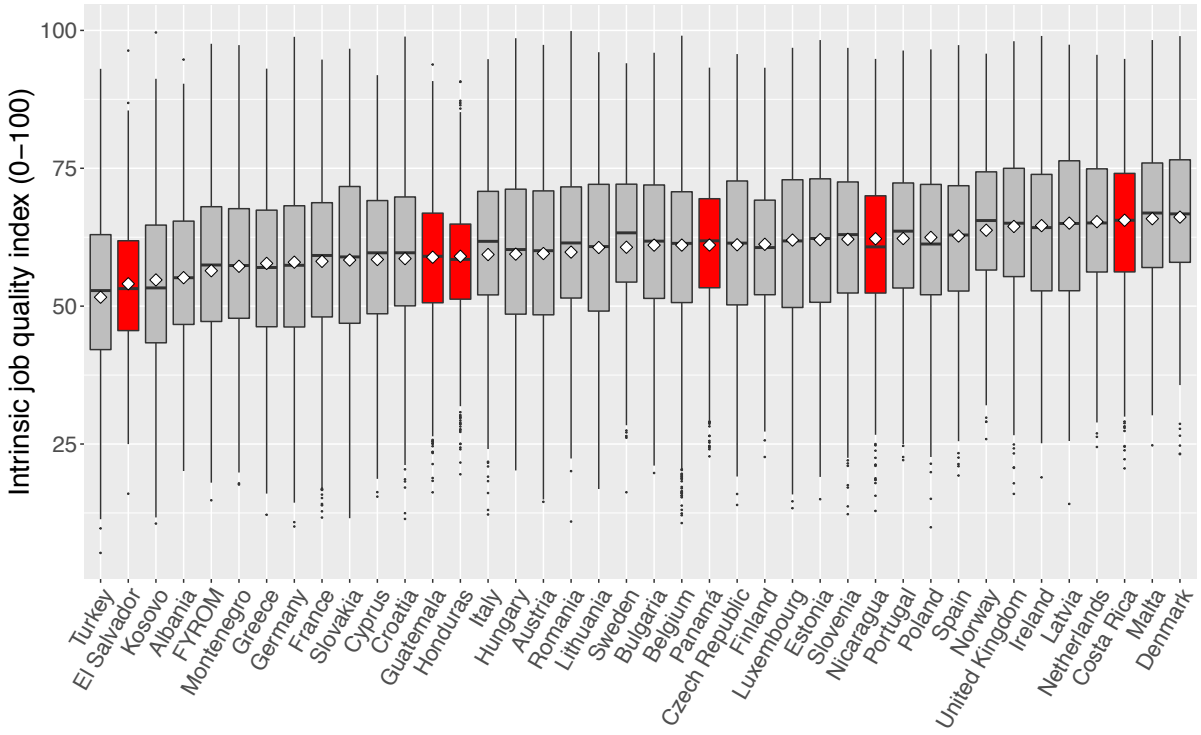


Source: author's elaboration from EWCS 2010 and ECCTS 2011.

The harmonised index of WTQ yielded a cross-country ranking in which Central American countries located somewhat in the middle, clustering around the grand average together with countries like Croatia, Malta, Slovakia, Latvia and Portugal (Figure 6.8). Jobs in Turkey and Netherlands appeared at the bottom and top ends, respectively. An analysis of variances indicated that the country effect on this index was of medium magnitude in Europe, $F(33, 43342)=116$, $p<.001$, *partial* $\eta^2=.081$; and smaller in Central America, $F(5, 11950)=8.9$, $p<.001$, *partial* $\eta^2=.004$. On a regional scale, the mean WTQ was higher in Europe ($M=48.4$) compared to Central America ($M=44.3$), but of similar dispersion ($SD=24.3$). Upon closer inspection, it was observed that workers in the isthmus work longer hours but had more discretion to organise their schedules, which may be related to the higher proportion of self-employed in the continent.

Be that as it may, Figure 6.9 shows that the Latin American countries under study were far more contained within the range of EU countries pertaining IJQ. While Costa Rica located among the top countries with a mean score similar to Malta and Netherlands; El Salvador located at the second lowest place only after Turkey. Jobs in Guatemala and Honduras remained within the lowest third sharing similar scores to Croatia and Italy. On the whole, the country effect on IJQ was significant across regions but rather small in both Central America, $F(5, 12017)=166$, $p<.001$, *partial* $\eta^2=.065$; and Europe, $F(33, 43397)=81.7$, $p<.001$, *partial* $\eta^2=.058$. At the regional level, the means of IJQ were virtually the same in Central America and Europe but the individual scores were more dispersed in the latter ($M=59.9$ and $SD=14.8$ in Europe, compared to $M=59.7$ and $SD=12.6$ in Central America).

Figure 6.9. Europe and Central America: Intrinsic Job Quality by country



Source: author's elaboration from EWCS 2010 and ECCTS 2011.

If we looked at each IJQ component separately, we would notice that the dispersion of Central American countries was basically given by their variability in terms of the quality of physical environment, in which extremes cases like Costa Rica and El Salvador kept a similar order to the one observed in Figure 6.9.

It is worth re-emphasising that even in the larger sample of countries, some cases move in opposite directions across the ranking depending on the dimension of JQ analysed. For instance, Costa Rica's average quality of earnings was among the lowest 30% out of the larger international sample, however still ranking among the countries with the highest IJQ. El Salvador, instead, remained accumulating bad conditions in both earnings and IJQ. Acknowledging that Central American countries have markedly lower per capita GDP than European countries, these results confirm that country differentials in IJQ are not closely and always associated to variations in economic development (Eurofound, 2012).

6.3 Inter-index correlations at the country level

As shown in the previous boxplots most Central American and European countries vary their rank-order depending on the component of JQ considered. Moreover, this suggests that the earnings, WTQ and IJQ indices are measuring different latent concepts, and much of this multidimensionality would be lost if all these aspects were synthesised into a single index.

Table 6.2. Descriptive statistics and ranking of Central American countries according to different dimensions of job quality

		GTM	SLV	HND	NIC	CRI	PAN
	Mean	2.59	2.63	2.57	2.52	2.82	2.89
	Std. Dev.	0.29	0.25	0.32	0.31	0.30	0.24
	N	1652	1999	1997	1982	1393	1927
Quality of Earnings (log US$)	Rank	4	3	5	6	2	1
	Mean	53.6	53.9	49.6	52.7	52.9	50.1
	Std. Dev.	20.8	18.7	21.5	21.6	21.2	21.8
	N	2002	2004	2003	2004	2004	1990
Working Time Quality (0-100)	Rank	2	1	6	4	3	5
	Mean	27.0	27.9	24.8	30.7	21.2	20.0
	Std. Dev.	34.5	31.0	33.1	36.1	33.4	28.3
	N	1894	1968	1937	1962	1884	1723
Hours	Rank	3	2	4	1	5	6
	Mean	77.5	76.5	73.3	73.4	76.2	73.3
	Std. Dev.	20.7	20.6	24.9	24.7	27.8	31.2
	N	1995	2003	1992	2004	2004	1983
Scheduling	Rank	1	2	6	4	3	5
	Mean	29.2	29.5	24.4	23.6	32.0	15.9
	Std. Dev.	38.3	37.2	34.6	36.4	40.3	26.0
	N	582	603	546	708	1065	1059
Working time control	Rank	3	2	4	5	1	6
	Mean	76.7	81.4	76.3	85.8	87.1	92.2
	Std. Dev.	42.3	38.9	42.6	34.9	33.5	26.8
	N	576	605	602	706	1078	1013
Short-term flexibility	Rank	5	4	6	3	2	1
	Mean	65.6	63.1	65.0	68.1	69.1	68.0
	Std. Dev.	12.6	11.9	13.0	13.7	12.8	11.2
	N	2004	2004	2004	2004	2004	2004
Intrinsic Job Quality (0-100)	Rank	4	6	5	2	1	3
	Mean	64.1	60.8	63.9	68.6	70.6	73.1
	Std. Dev.	18.6	19.9	18.4	16.7	18.7	16.8
	N	2004	2004	2004	2004	2004	2003
Physical environment	Rank	4	6	5	3	2	1
	Mean	83.1	85.6	76.6	82.5	80.8	84.8
	Std. Dev.	32.0	30.1	36.7	31.8	30.8	24.0
	N	2004	2004	2004	2004	2004	2004
Social environment	Rank	3	1	6	4	5	2
	Mean	58.9	50.9	64.8	64.9	68.5	56.2
	Std. Dev.	19.1	19.6	20.1	22.0	19.7	20.6
	N	2003	2004	2003	2004	2004	2001
Appropriate intensity	Rank	4	6	3	2	1	5
	Mean	56.3	55.0	54.5	56.3	56.6	57.9
	Std. Dev.	15.5	15.8	15.6	16.5	17.7	18.6
	N	2004	2004	2004	2004	2004	2003
Skills and autonomy	Rank	3	5	6	4	2	1

Note: the scaled-coloured cells indicate the country's ranking position in each JQ scale.
Source: author's elaboration from ECCTS 2011.

To help visualise this varying country performance, Table 6.2 summarises the mean value, standard deviation and ranking of all job quality dimensions and sub-dimensions by country. Country rankings were sequentially coloured from darker red to darker blue indicating the country's position from the 1st to the 6th place. In short, if one country accumulated all the good jobs, we would see all its cells coloured in red, whilst if one country accumulated the worst jobs its cells would all be blue-coloured. Therein we can observe that only Costa Rica and Honduras tend to keep their extreme ranking positions stable across the three grand indices: while Costa Rica generally accumulates the best jobs (red cells), Honduras generally performs more poorly in all dimensions (blue cells). But even in these two cases the

accumulation effect is not total. Further inspection in Table 6.2 shows that countries also changed their relative order when looking at the components of WTQ and IJQ. For instance, Honduras, moved up to the 3rd place in terms of appropriate intensity, while Costa Rica moved down to the 5th place in quality of social environment. Another illustrating case of this changing pattern is Panama, whose jobs appeared as the best paid, yet the country ranked 5th in the quality of working time.

A more accurate way to test whether the multidimensionality of JQ is rightfully captured in the Central American context, is by examining the magnitude together with the direction of the correlations between earnings, WTQ and IJQ. From this perspective, we should not necessarily expect that the three indices correlate positively and strongly between each other in that we are not looking for redundancy, but holism in capturing what constitutes a 'good job'. Table 6.3 contains the inter-index correlation coefficients, stratified by country. Consistent with our assumptions, it is observed that although the three JQ grand dimensions correlate between each other in most nations, they do so modestly, with coefficients that do not surpass 0.2 in magnitude.[86]

Noteworthy, in Table 6.3 is the direction of the resulting correlations. Throughout the isthmus earnings correlated negatively with both IJQ and WTQ, while the latter two correlated positively between each other. This is an indication that, regardless of the country of residence, in all six cases there is both an accumulation and a compensating effect between good and bad job attributes. Specifically, it was found that having bad intrinsic working conditions together with bad quality of working time, is generally compensated by a higher level of wages. At the same time, intrinsic amenities and time related advantages tend to go together. Even more interesting is that the earnings compensation effect seemed stronger in the so-called Northern Triangle countries – El Salvador, Honduras and Guatemala – while in the rest of the countries, the trade-off between intrinsic job features and pay was either weaker or not significant at the 95% confidence level.[87]

In Figure 6.10 we can take a deeper look into the system of pair-wise correlations between earnings and the components of the WTQ and IJQ indices (eight variables). Also in this case, we do not expect to find strong correlations as the indices were constructed trying to grasp several different dimensions of one general concept. Indeed, Figure 6.10 shows that the correlations between the components of the WTQ index are weak to moderate in all countries; not surpassing 0.2.

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[86] Similar analyses undertaken in Eurofound (2017) and Muñoz de Bustillo et al. (2011) also yielded moderate correlation coefficients of around 0.05 to 0.3 between the grand dimensions of JQ (i.e. earnings, intrinsic features, working time, and prospects).

[87] Strictly speaking, correlation coefficients should not be compared between countries, unless converted with Fisher's transformation to indicate the statistical significance of observed differences. However, the absolute magnitude gives an insight into such differences.

Table 6.3. Pearson correlation coefficients between grand job quality indices, by country

		Earnings (log)	WTQ	IJQ
Guatemala	Earnings (log)	1.00 ***		
	WTQ	-0.11 ***	1.00 ***	
	IJQ	-0.12 ***	0.09 ***	1.00 ***
El Salvador	Earnings (log)	1.00 ***		
	WTQ	-0.17 ***	1.00 ***	
	IJQ	-0.18 ***	0.10 ***	1.00 ***
Honduras	Earnings (log)	1.00 ***		
	WTQ	-0.12 ***	1.00 ***	
	IJQ	-0.21 ***	0.12 ***	1.00 ***
Nicaragua	Earnings (log)	1.00 ***		
	WTQ	-0.10 ***	1.00 ***	
	IJQ	-0.07 **	0.15 ***	1.00 ***
Costa Rica	Earnings (log)	1.00 ***		
	WTQ	-0.12 ***	1.00 ***	
	IJQ	-0.03	0.11 ***	1.00 ***
Panama	Earnings (log)	1.00 ***		
	WTQ	-0.04	1.00 ***	
	IJQ	-0.04	0.07 **	1.00 ***

*p<0.05; **p<0.01; ***p<0.001
Source: author's elaboration from ECCTS 2011.

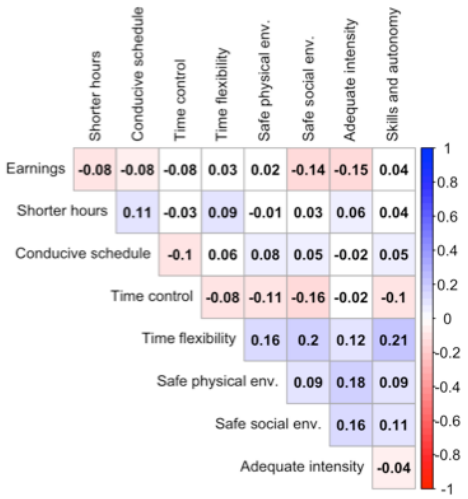
The components of the IJQ index correlated slightly higher, up to approximately 0.4 in some countries. Moreover, the presence of white cells indicated that several intra-index correlations were not significant at the 95% confidence level.

The intra-index correlations of the IJQ dimension resulted generally positive (blue-coloured). One notable exception is that in most countries, deploying more skilful and autonomous jobs is accompanied by a rise in intensity. In the North-Triangle countries, this sort of trade-offs seemed to be more common among the variables comprising the concept "good working time", as indicated by a higher number of red-coloured cells. The most notable example is that having higher control to decide working schedules goes with the associated disadvantage of being granted less permission to take some time off in the short-term to attend personal or domestic issues. The latter is a conceivable example of how two defining aspects of the quality of working time do not necessarily go hand in hand.

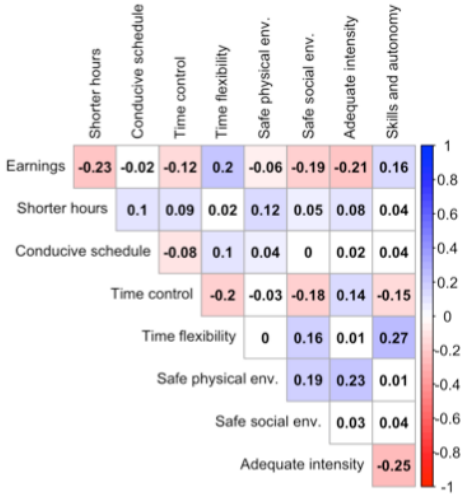
A disaggregated picture also helps to evidence that the negative correlation previously found between the earnings and the WTQ index is essentially explained by the extension of working hours; that is, in all Central American countries the longer hours spent at work, the higher the wages. Working more often during night or weekend schedules is commonly rewarded by higher wages still, surprisingly, such association was not found significant in Central American countries (only weakly in Guatemala and Honduras where $r = -.08$, $p < .05$). The negative correlation between working time amenities and pay level is consistent with previous findings in the European context. Furthermore, both studies by Muñoz de Bustillo et al. (2011) and Eurofound (2012) found that there is a clear wage premium associated to working long hours.

Figure 6.10. Pearson correlation coefficients between job quality components by country

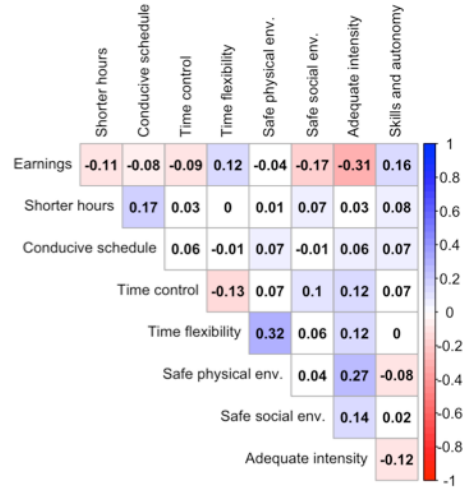
Guatemala



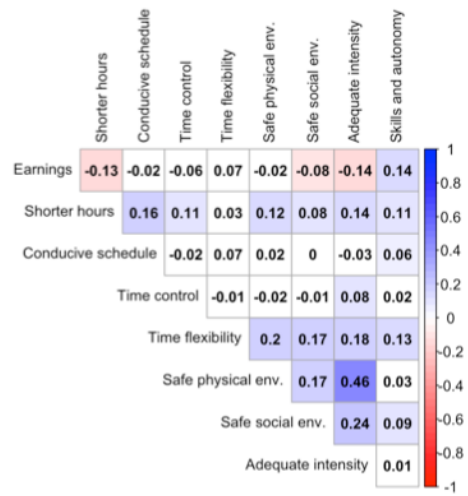
El Salvador



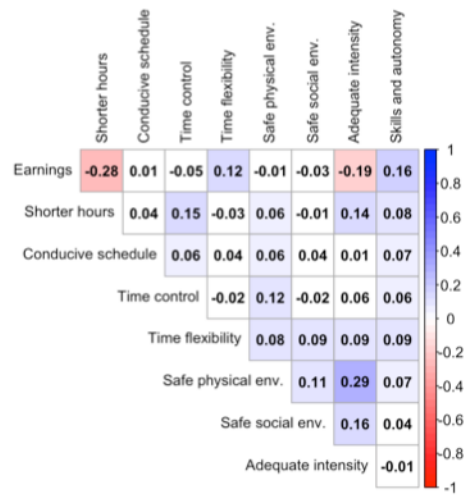
Honduras



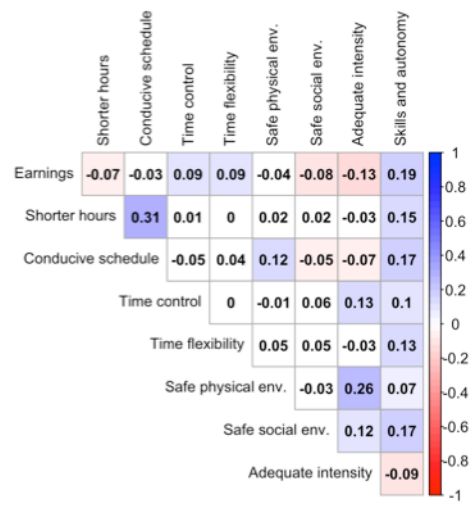
Nicaragua



Costa Rica



Panama



Note: white cells indicate no significant relationship at 95% confidence level.
Source: author's analysis from ECCTS 2011 micro-data.

The negative association between pay and IJQ is more specific of the Central American region. Furthermore, in the North Triangle countries, that result seems to be caused by the negative relationship of social environment and intensity against salary (as represented by the darker red cells in Figure 6.10). As expected, though, the only intrinsic aspect that keeps a positive correlation with earnings is that of skills and autonomy; in all countries but Guatemala, higher skills and decision autonomy are rewarded with higher earnings.

All things considered, these results do not support a theory of highly segmented labour markets, that is, a context which one segment of jobs accumulates all the benefits, while others accumulate all the bad conditions.

Lastly, the positive correlations found between IJQ and the WTQ indices are more consistent with Muñoz de Bustillo's findings of an accumulation of job amenities. Specifically, it was found that all the associations between WTQ sub-components, and IJQ sub-components were either positive or not significant (light blue or white coloured cells in Figure 6.10). An exception to this trend was the trade-off between enjoying socially safer workplaces or more skilful and autonomous jobs, and a lower control to organise one's working schedules. Such situation was only observed in Honduras and El Salvador; it is not surprising considering that in countries with higher rates of social violence, strict organisation of working time has been a common strategy pursued by employers to avoid exposing their employees to criminal risks.

6.4 Understanding job quality disparities between Central American countries

A series of questions arise after looking at how countries assimilate or differentiate between each other regarding their capacity to provide good quality jobs. For instance, do JQ differences across the isthmus follow from countries' different levels of economic or human development? Are the differences associated with the size of the informal sector or with the rate of international migration? How much of cross-country variation in JQ is the result of different industrial structures? Furthermore, how much could be explained only by idiosyncratic factors like work protection culture or the capacity of labour institutions? Certainly, we do not know much about these patterns even in other world regions like the EU – apart from the societal Scandinavian effect described in some comparative analyses (e.g. CIPD, 2015; Gallie, 2003; Green et al., 2013; Kalleberg, 2012). Therefore, the following section is essentially exploratory and aims at shedding light on the macro drivers of cross-country differences in JQ, while assessing if the application of our indices led us to reasonable results in light of the socioeconomic and institutional context of each country.

6.4.1 Macro-level drivers of JQ: what to expect?

In order to derive some evidence-based hypothesis against which we can contrast our results, here I review some of the macro-level factors considered to affect the average quality of jobs on an aggregate scale. The factors I refer to are mainly characteristics of the labour market (e.g. economic growth, unemployment rates, trade liberalisation), as well as characteristics of labour institutions (international labour standards, State role and national labour legislation, workplace inspection, and unionisation). The defining aspect of such factors is that they are rather external to workers' characteristics and to the job itself, but may explain part of the (or lack of) asymmetries in JQ between countries.

For instance, conventional economics conjointly with modernisation theorists consider that the improvement of employment and working conditions goes hand in hand with nations' economic growth measured in *GDP per capita* (Weller & Roethlisberger, 2011, p. 64). For decades since the Washington Consensus, Latin American governments have prioritised macro-economic policies to enhance GDP growth as the main avenue to improve the quality of employment (Sehnbruch et al., 2015). Naturally, it is likely that the earnings aspect of jobs is closely related to countries' economic development, and that differences in the pay dimension of JQ are "wider than the differences in other job attributes" due to the direct impact that GDP has on it (Eurofound, 2012; Muñoz de Bustillo et al., 2011). Yet, the evidence available thus far does not always support the correlation between GDP growth and other dimensions of JQ. Moreover, the Global Rights Index annually released by the International Trade Union Confederation suggests that fairly wealthy countries can also perform poorly in the protection of workers' rights that are not reflected in the earnings index (ITUC, 2014, 2015, 2016, 2017).

The levels of *work supply and demand* can also affect the ability of states to provide good jobs. One hypothesis is that countries that deal with lack of employment sources are more likely to focus their policies and resources in creating more sources of employment, rather than improving the quality of the existing jobs. Another idea is that high unemployment rates can trigger experiences of job insecurity at the country level (Green 2009 in Eurofound, 2012, p. 27), weaken unionisation (Anner, 2011), and negatively impact on other JQ dimensions, as implied in the following excerpt:

> "If there is a surplus of available labour and workers are unable to migrate internationally, employers' leverage increases: They may offer lower wages or inferior working conditions as a result. By contrast, when demand for workers –or for workers with particular skills or industrial experience– exceeds supply, workers are able to achieve higher wages and better working conditions." (Mosley & Singer, 2015, p. 285).

Notwithstanding, against such hypothesis, Green's earlier comparative research reported that countries like the United States and the United Kingdom perform relatively deficiently on JQ despite being successful at lowering unemployment (Capelli, 2006).

The level of *economic liberalisation and globalisation* in which countries submerge, comes off as key contextual factor impacting on the aggregate quality of jobs. Critical theorists of globalisation argue that unfettered trade competition drags the poorest countries into a 'race to the bottom'. With the purpose of attracting more foreign direct investment (FDI), countries are pushed to lower the level of wages, worsen working conditions, and constrain workers' organisation. Precisely, drawing on data related to the manufacturing sectors in El Salvador and Honduras, Anner (2011, p. 305) verifies that international outsourcing incentivises employers to keep wages and unions to a minimum, thus coping with the increase in labour costs. According to Anner, the geographical dispersion of global value chains has weakened workers leverage to organise, strike and to negotiate better jobs.

In the same vein, it has been argued that the *highest inflow of TNCs* amid the process of economic globalisation, leads to work intensification and increased job insecurity (Aidt & Tzannatos, 2002; Ladipo & Wilkinson, 2002). In addition, aspects like the level of work control, working time, and career progression can also erode as a result of the higher geographical, numerical, temporal and functional flexibility that trade competition demands on workers (Burchell, 2002; Crompton, 2006; Hudson, 2002; Jacobson & Hartley, 1991; Ladipo & Wilkinson, 2002; Landsbergis et al., 2014). Likewise, Brown (2012) provides a critical insight into how integration of global markets generally results in the laxation of labour standards with regards to work intensification, occupational safety, verbal and physical abuse, freedom of association, etc.; particularly when such integration occurs between countries or regions at different stages of development.

Brown's contention lead us to emphasise the role that some *labour institutions*, understood as established labour laws or policies, can have in explaining cross-country variations in JQ, insofar they act as a buffer or enhancement of labour market forces. The institutional factor is also pivotal in the CA, in that "institutions enable or restrict the operation of political and economic activities, and in so doing they have an important influence on the achievement of capabilities" (Nambiar, 2013, p. 222). In a similar line, Kalleberg (2012) recognised that deregulatory states (i.e. with weak labour institutions of minimum wages, collective bargain and the political economy of the state itself) are associated with a higher polarisation of JQ at the country level. Similarly, Latin American experts acknowledge that "institutional factors play an important role in improving the quality of employment, which indicates the space for promoting policies of this quality, beyond those that stimulate economic growth and productivity" (Weller, 2011; Weller & Roethlisberger, 2011, p. 64).

It is worth discussing with more detail how each type of institution may impact on JQ. Firstly, the very *state* can be determinant in protecting workers' rights and working conditions amid a process of economic globalisation. Neoliberal market-driven models of economic development usually involve excessive deregulation of employment arrangements, wages, working hours, dismissal, and the erosion

of public benefits that have traditionally protected workers from unemployment, old-age and sickness (Crompton, 2006; Jacobson & Hartley, 1991; Ladipo & Wilkinson, 2002). There is a bulk of literature suggesting that, in the relationship between FDI and respect of labour standards, the state plays a fundamental role setting the level of protection and enforcement of labour standards, either raising them or colluding in the so-called 'race to the bottom' (Hough, 2012; Mosley & Singer, 2015; Payton & Woo, 2014; Westover, 2013).[88] In a different sense, the impact of state capacity on JQ can be seen in terms of the amount of public employment. Jobs in the public sector have traditionally been described as better than those in the private sector, in various aspects. Therefore, countries with smaller states that have extensively privatised public services like telecommunications, health or education, could show lower JQ on average.

Secondly, the adherence to *international labour standards* may be another driver of JQ at the aggregate level, inasmuch as these standards contribute to govern the labour market and shape national laws concerning working conditions. However, some experts contest this association for the Latin American case, claiming that despite subscribing to numerous ILO conventions, there is no reinforcement. Bensusán (2009) sustains that employment quality in these countries depends more on the implementation ability of such labour agreements and standards, but given the absence of international coercive or penalty mechanisms, national legislation is more important to promote the enforcement of these standards and to ultimately improve JQ.

Thirdly, *national legislation* systems on aspects directly concerning some of the dimensions of JQ, are also expected to impact on how good jobs are at the aggregate level. Scandinavian countries like Norway and Finland, for instance, have been widely recognised for its intensive and cumulative regulation on employment (e.g. enhancing variety, autonomy and decision making amongst employees), which reflects on their relatively higher JQ outcomes (Eurofound, 2012; Gallie, 2003; Green, 2006). Nowadays, the OECD (2015) reaffirms this association by recommending states across the globe to strengthen labour laws that protect workers in order to improve the quality of existing jobs. The type of legislation they call for includes wages standards, working hours, health and safety legislation, as well as employment protection legislation (EPL). In this regard, Crompton (2006, p. 137) analyses the impact of work legislation specifically on WLB by comparing highly regulated labour markets in Europe with those more unregulated in US and the UK concluding that "national policies can have a substantial impact on capacities for work-life articulation". For instance, the fact that the average extension of working

[88] Specifically, Westover (2013) builds on Athul Kohli's (2004) typology of state-directed development, to explain cross-country differences in job quality. He roughly concludes that workplace safety and health, wages, working hours, job enrichment, discretion and general working conditions tend to be better in 'fragmented multi-class regimes' (i.e. states with fairly distributed power and democratic goals) and worse in 'neo-patrimonial states' or in 'cohesive-capitalists states' (i.e. states with high concentration of power and more oppressive, that facilitate availability of capital, labour, technology and entrepreneurship, while also ensuring availability of cheap, flexible and disciplined labour supply).

time in France is lower than in other countries is a direct consequence of their 35-hour working week legislation; while working hours tend to be longer in countries with less regulation.

Fourthly, the enforcement role played by national *Labour Inspection Systems* (LISs) is another institutional element that may be associated with the quality of jobs on a country scale. However, in more developing contexts such association may be more nuanced. For instance, Schrank and Piore (2008) argue that, compared to the more stringent inspection style of the United States, Latin American LISs are far more flexible and prompt to adapt the established norms to the needs of the business, therefore eroding any agenda on JQ. The Latin American model of inspection is inherently discretionary, the authors claim. Bensusán (2009, p. 1034) adds that, compared to other Latin American countries, Central American LISs have resulted particularly less successful in ensuring decent jobs because their modernisation process was driven by a labour policy favourable to the interests of employers over those of employees.

Lastly, there are contentious accounts about the impact that *trade union membership and collective bargaining* can have on country-level JQ. The acquisition of political force through trade unions has been particularly important within the Marxist sociological framework for it is considered one of the main mechanisms to improve workers' wages, scheduling, occupational safety among others things (Muñoz de Bustillo et al., 2011). Even from the capabilities perspective, it has been stated that the promotion of trade unions as 'collective' capabilities should help expanding workers' individual capabilities (Miles, 2014).[89] In Latin America, local unions are believed to contribute to shape the direction of labour market regulation with support of labour rights activists overseas (Murillo & Schrank, 2005). Additionally, union membership can increase the decision latitude available to the worker at the macro-level (Karasek & Theorell, 1990, p. 60). In Britain as in other cases, the reduction in union power has been considered part of the cause of work intensification (Green, 2004).

Other accounts are more sceptical about the efficacy of workers' organisations in improving working conditions, especially in contexts where unions have vanished within the large informal sector. Moreover, where they do remain alive, are highly politicised or co-opted by the state. In that case, the sole exercise of representation rights in the workplace does not always ensure the effectiveness of negotiations in the workplace. Other studies suggest that, although unions might contribute to overcoming wage inequalities worldwide, their impact on other working conditions is likely to depend on the economic, political and institutional environment (Aidt & Tzannatos, 2002). In the same line, but building on the theory of Varieties of Capitalism (VoC), Schneider (2009, p. 561) alludes to the weaker potential of Latin American unions to affect JQ, because of their atomism, 'short-term links to

[89] Miles (2014) refers in particular to 'structures of living together' as an omitted element in Sen's approach but which has demonstrated to be crucial for promoting workers' capabilities. As possible avenues to enhance collective capabilities of labour, the author also suggests policies that uphold the rule of law, empower weaker groups to negotiate solutions, promote a plural civil society, encourage labour political participation and ensure efficient work dispute resolution mechanisms.

firms' and weak or no horizontal relationships to other unions at the plant-level.[90] Additionally, he documents the prohibition of unions 'from negotiating on anything but wages, thereby precluding precisely the kinds of discussions over work organisation, working time, training and other issues that are at the heart of plant-level relations in CMEs [coordinated market economies]' (Schneider, 2009, p. 563).[91]

6.4.2 Controlling by industrial and occupational characteristics of the sample

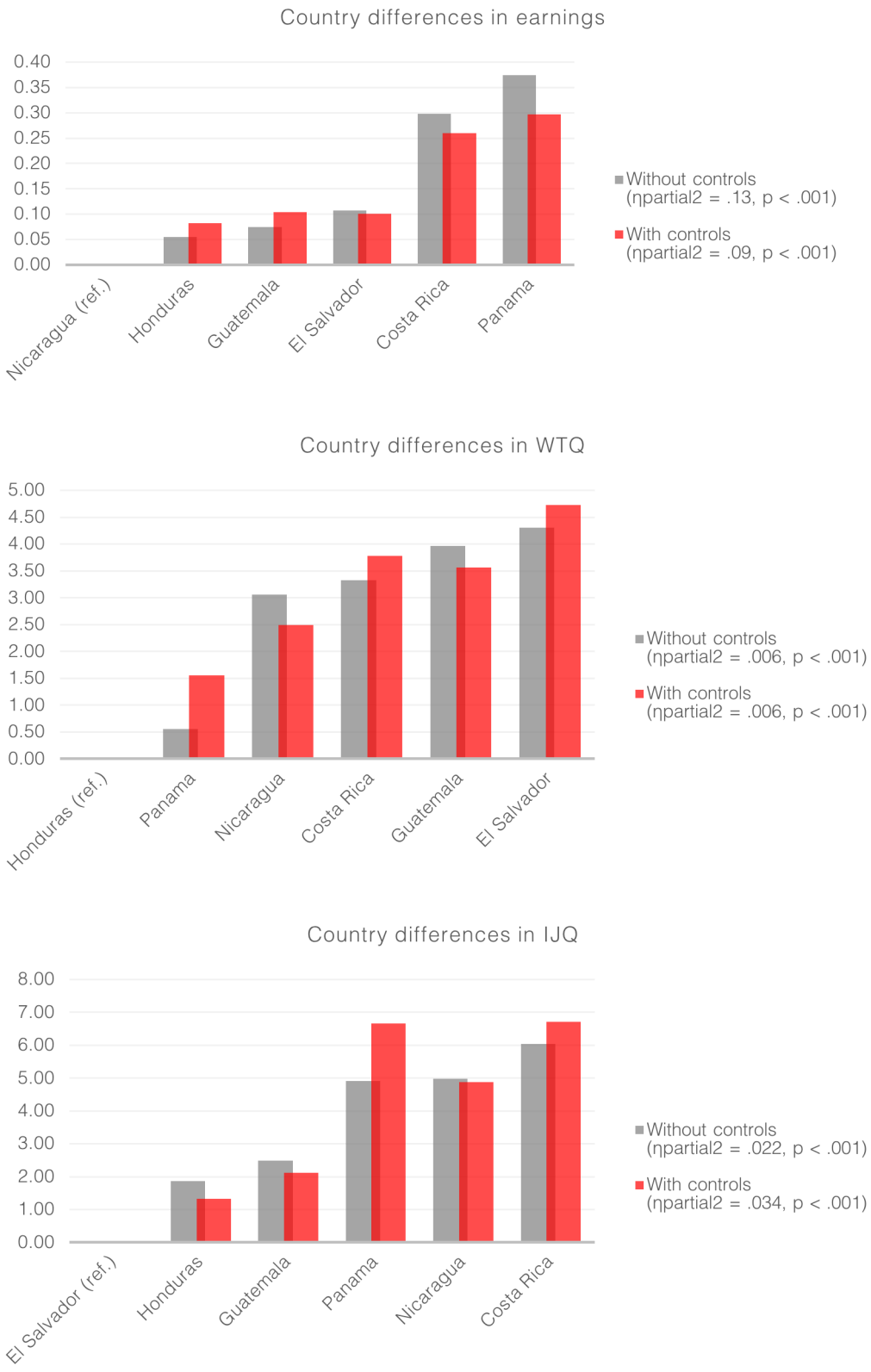
Before exploring possible associations between JQ levels and macro-level factors such as labour market characteristics and labour institutions, it is worth analysing if the international variability on JQ is an artefact of the nations dissimilar *industrial composition*. In Chapter 5 it was established that specific industries are associated to different working conditions. Consequently, if these associations were significant on a national scale, it may be possible that countries' industrial structure could play a role in JQ differences at the aggregate level. For instance, since the expanding service or tertiary sector is often associated with better skills use and safer physical environments, then it is plausible that in countries where the proportion of employment in the service sector is larger, the average score of IJQ is higher as well. On the contrary, in those countries where agriculture, forestry or other primary activities still employ a large proportion of workers, it is to be expected that earnings and IJQ (the quality of physical environment in particular) average worse than in other countries. Yet, Green and Mostafa found that in Europe the industrial structure of each country did not account for much of the cross-country differences in JQ (Eurofound, 2012).

We saw in Chapter 3 that Central American countries differentiate notably by their industrial structure. C*irca* 2011 primary sector activities still represented a third of employment in countries like Guatemala, Nicaragua and Honduras; while more modern service-related activities where far more expanded in Costa Rica and in Panama. Interestingly, Nicaragua and Honduras do rank at the bottom in the earnings index, while Costa Rica and Panama rank high in terms of both earnings and quality of the physical environment.

[90] Although the VoC framework (Hall & Soskice, 2001) remains scarcely developed in the Central American literature, it has been used to explain country-level differences in JQ in Europe. For instance, Green and others (2013) used the VoC typology to hypothesise that jobs would be on average better in coordinated market economies compared to liberal market economies, because in the former long-term employment relations are more valued by employers.

[91] In this regard, Sánchez-Ancochea (2009, p. 80) contents that trade unions 'may have little participation in collective bargaining at the firm and industry levels in Latin America, but they still have some influence on policy at the macro-level.'

Figure 6.11. Differences in mean JQ before and after controlling for socio-demographic and occupational characteristics



Source: Appendix Table A.9.

Similarly, in Chapter 5 it was observed that other job-related characteristics like the size of the work establishment or the type of occupation, also have from a moderate to a strong effect on JQ. For instance, working in smaller establishments resulted to be positively associated to quality of the social environment, the level of work effort or the discretion to arrange work schedules, yet negatively related to pay; workers in professional occupations reported better working conditions in general, but more intense jobs.[92]

In order to rule out that these rankings were an artefact of varying industrial compositions, or differences in occupation, firm size, etc. I performed a multivariate analysis in which the three main dimensions of JQ are regressed on country – our variable of interest – controlling for the relevant compositional variables as well as adjusting by gender and age groups to ensure that we are comparing the same groups of workers in every country. The resulting regression coefficients are displayed in Table A.9. in the Appendix. Figure 6.11 offers a more graphical evidence of the estimated coefficients both before and after including these controls; represented by the grey and red bars respectively. In these charts, the lowest ranking country of each dimension was taken as the reference category.

Therein, it is clear that the relative position of countries in each dimension remained roughly unchanged. In the Earnings scale, all countries keep the same ranking order before and after. Yet, cross-country gaps in earnings compared to Panama, all narrow after controlling for industry and other factors. In the WTQ scale, only Costa Rica changed its place to overtake Guatemala in the second best position, but the size of the country effect on WTQ remained the same. In the IJQ index, the only change after accounting for industry was that Panama moved from the third to the top score, and that the differences between the top two countries (Panama and Costa Rica) and the other four, polarised even more.

The main point to note was already recognised by Green and Mostafa in their analysis of the European region (Eurofound 2012): that gross cross-country differences are not essentially driven by labour force and industrial composition. These remaining country effects may be revealing the role played by macro-level and country-specific factors.

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[92] The public or private ownership of the job has also been considered in the literature as a typical determinant of job quality, with the former associated to significantly better economic rewards, discretion, physical environment, and working time than the latter. In that sense, Costa Rica and Panama's better ranking in earnings and IJQ could also be an artefact of the larger proportion of public employment in those countries, therefore, the type of ownership should also be accounted for when analysing cross-country differences in JQ. However, this factor is not included as a control variable for two reasons: first, because it is partially correlated with industrial sector; second, because the size of the public sector represented a low proportion of total employment across the region by 2011 (only in Panama and Costa Rica, represented above 10% of employment).

6.4.3 Observed associations of job quality with development indicators

Based on the contextual information from Chapter 3 and the literature revised at the beginning of this section, it can be expected that the JQ country rankings derive from their relative performance on other developmental indicators that have been typically – perhaps wrongly – associated to the quality of jobs on a country level, such as GDP per capita, HDI, unemployment rate, or the size of the informal sector.

First and foremost, it is anticipated that Costa Rica and Panama show higher average JQ than their neighbours, given that they often present better socioeconomic indicators. However, since the institutional capacity to translate those economic resources into capabilities also varies across countries, other JQ indices may not necessarily follow from countries' economic performance. Indeed, a quick contrast of the JQ country rankings against the statistics presented in Chapter 3, suggests that only the pay index matches directly with countries' relative order by GDP per capita. Differently, countries' ability to provide jobs with a right organisation of working time and with good intrinsic features is not necessarily associated with their economic development: this is clearly illustrated by the case of Panama which, despite being one of the richest countries, its ability to provide jobs with good quality of working time is amongst the worst three in the isthmus. Similarly, Nicaragua had the lowest GDP per capita and still ranks third in the IJQ scale, departing significantly from the countries of the Northern Triangle (see Figure 6.11).

A similar association is found between earnings and national indicators of poverty or the HDI. For instance, we saw in Chapter 3 that Costa Rica and Panama were situated as the countries with the lowest proportion of poor people, followed closely by El Salvador, all with fewer than 5% of people living on less than $1.90 a day; whereas in Honduras this proportion was close to 19%. Despite having such dissimilar proportions of population living in poverty, the intrinsic quality of the jobs created in El Salvador is, on average, as deficient as in Honduras. The HDI gives a better summary indication of how per capita income is translated into other aspects like health and education, but still does not offer a good explanation to countries' performance in dimensions of JQ other than salaries. El Salvador serves as example once again: being the Central American country with the third highest HDI *circa* 2011, their average IJQ was the lowest of the region.

Then, are the JQ rankings observed associated with the levels of work supply and demand? The literature revised above outlined that there may be several avenues by which high unemployment can negatively impact on a country's average JQ. From that perspective, we could have expected that Costa Rica, which had the highest unemployment levels circa 2011, ranked poorly in the average JQ, which is certainly not the case in our results. Similarly, regardless having technically full employment in 2011, Guatemala performed relatively bad in both the earnings and the IJQ indices. Overall, these results strongly support Sehnbruch's (2008) claim that job creation quantity is not necessarily followed by job quality.

Table 6.4. Central America circa 2011: proportion of occupied population reporting fear of job loss

	Total Employed	Employees	Independent / Self-employed
Guatemala	72.4	71.2	72.6
El Salvador	66.6	67.2	65.8
Honduras	72.4	74.6	71.4
Nicaragua	63.0	62.0	63.0
Costa Rica	58.4	59.8	57.0
Panama	57.2	54.8	59.4

Note: figures correspond to average proportions of 2009, 2010, 2011, 2013 and 2015.
Source: author's elaboration from CEPALSTAT (2018) on the basis of Latinobarometro Corporation Survey.

On similar grounds, the idea that informalization deteriorates workers' leverage to improve their working conditions also have been held in the literature (Trejos & Del Cid, 2002). Thus, it could be expected that countries with higher informality rates (i.e. Guatemala and El Salvador according to ECLAC's statistics presented in Chapter 3) present lower average JQ, provided there were no counterbalance mechanisms at place like regulations of minimum wage or working-hours. This association is difficult to test statistically with only our 6 cases of study and without accounting for institutional factors, but at first glance our resulting JQ rankings indicate that the level of informalization of the economy is not directly related to countries' average quality of monthly earnings. As evidence, Nicaragua had in 2011 an informal sector considerably smaller than the countries in the Northern Triangle but figured as the country with the worst payment level. Nor it seems informality to be related with WTQ, which is demonstrated by the fact that El Salvador ranked somewhat better than Costa Rica in this dimension, despite having an informal sector 20 points larger. If applicable, countries' proportions of informal employment matched more directly their relative performance in quality of the physical environment. Certainly, it may also be the case that rates of informal employment are more strongly related to a prospect dimension of JQ. In face of the lack of a prospects index in our data, we looked at the figures of job insecurity provided by CEPALSTAT, which, indeed, suggest the existence of a negative association: the larger the informal sector, the higher the proportion of workers reporting fear of losing their job (Table 6.4).

Outmigration rates also must be considered to interpret our resulting JQ rankings, not only because it may work as an outlet for countries unemployment, but because it may be indicative of bad quality jobs acting as a push factor. According to the information provided in Chapter 3, such association is not as strong as anticipated, but it is interesting to confirm that El Salvador, being the country with the largest proportion of workers living abroad, ranked as the country with worst IJQ; whereas Costa Rica has the highest immigration rate in the isthmus – and in Latin America – and had the highest average IJQ. If statistically confirmed, this apparent association could be a good indicator about the validity of our JQ indices.

In ideal circumstances of data availability, the correlations discussed above could be tested with a larger sample of countries to obtain more stable results. Only for exploratory purposes, appended to this document I included a series of scatterplots that illustrate how JQ dimensions (as dependent variables) would correlate to indicators such as: GDP per capita, income inequality, HDI or unemployment, covering a pooled sample of 34 European and 6 Central American nations.[93] Even if the a sample of 40 cases does not give us a strong statistical power, it is worth noting that the scatterplots confirm the idea that the various development indicators explored only correlated more strongly with the earnings dimension of JQ. Rather applicable to European countries, there was an overall positive correlation between WTQ and GDP per capita. On the contrary, the IJQ index correlated weakly with the majority of the indicators selected.

These results help to stress the idea that the economic dimension of JQ is the only one that can even approximately be derived from other developmental indicators commonly used as proxies of JQ. The WTQ and IJQ indices are telling us a completely different story. Rather than contesting the validity of the indices, this simply means that they show us something different to what we would observe using a narrow economic perspective.

6.4.4 Observed associations of job quality with institutional factors

Facing the lack of strong and clear associations between JQ indices with developmental or industrial factors, it remains to explore if countries' ability to provide good jobs is down to more idiosyncratic factors like labour institutions and workers' protection culture. In Chapter 3, we briefly described how some of these institutions performed in Central American countries from a comparative perspective. Then, at the beginning of this section, it was discussed how JQ at the aggregate level may be driven by factors of institutional nature according to the literature. In what follows, I discuss to what extent the observed JQ rankings match countries' institutional performance. Again, rather than providing causal evidence about the role of labour institutions behind JQ disparities, this exercise sheds light on how such institutions impact on the creation of work-related capabilities, while assessing whether the country patterns obtained with Green and Mostafa's model are likely in light of those country specificities.

Part of the literature reviewed argues that JQ asymmetries between countries could be associated to the complexity and comprehensiveness of national regulatory frameworks as well as the adherence to international labour standards. However, it was observed in Chapter 3 that no prominent divergences existed on paper between Central American nations that could explain the international variability in earnings and IJQ. On the one hand, all six countries in the study had ratified the eight fundamental

[93] Rank correlations were used to reduce the influence of outliers. Yet, these figures should be analysed with caution because they derive from a harmonised but abbreviated version of Green and Mostafa's indices.

ILO conventions by 2011, yet all performed differently in terms of earnings and IJQ. The correlation between JQ country averages and the total number of conventions ratified, was not clear either. For instance, El Salvador and Honduras are the countries that fewer ILO conventions have subscribed, which matches their lower rank order in IJQ. Differently, Guatemala had ratified more than 70 conventions and still showed a poor performance in this dimension of JQ. Guatemala's case is more consistent with the idea that, in practice, international labour standards only work as a 'declaration of good intentions' with no binding nature.

Moreover, the information provided in Chapter 3 suggests that only small differences exist in countries' national legislative frameworks in terms of workers' rights protection. Yet, national bodies of labour legislation do not necessarily correspond with the JQ ranking observed. An evident example is that Honduras, having a statutory minimum wage as high as that in Costa Rica, yielded a significantly lower mean of monthly earnings.[94] As previously discussed, this result looks credible considering that in countries with high rates of informal employment like Honduras, legal regulations do not reach to the majority of the working population. Likewise, as other studies suggest, it could have been expected that "weaker restrictions on the maximum number of hours that employees can work would tend to increase the number of long-hours jobs" (CIPD, 2015, p. 26); however legal caps in weekly hours of works did not show a close association with average JQ levels. Specifically, despite that Costa Rica, Panama and Nicaragua had the same normal working hours limit of 48 hours per week in 2012, the three countries showed varying performance in the WTQ index.

All in all, there are no strong divergences between countries in the level of protection of basic worker's rights, at least 'on paper'. Most Central American labour regulation frameworks formally recognise workers' fundamental rights pertaining work contracts, social security, retirement and health benefits, training, occupational safety, maternal care and collective bargaining. The lag of legislation addressing dimensions like the social environment, autonomy, intensity was somewhat generalised.[95] This suggests that the observed country-level divergences in JQ may be more closely associated with the enforcement practice and protection action of LISs, trade unions and even from the very state; institutional

[94] It is worth noting that Panama and Costa Rica, which rank evidently better in this regard, showed a more diversified minimum wage structure, with over 30 salary levels depending on industry, occupation or skill level, also on establishment size and region in the case of Panama. Thus, is not necessarily the level of the minimum wage system but also its complexity what may be reflected in the earnings quality index.

[95] As suggested in Chapter 3, qualitative differences between countries' legislations in aspects affecting the quality of the social environment appeared too irrelevant as to associate them with the differences found in the cross-country ranking of social environment. The skills and discretion dimension of JQ has not been subject of much regulation either, except for the training aspect, which nonetheless is considered of "low quality" given its "limited coverage and the scarce diversification of the educational offer according to the needs of the labour market" (PEN, 2008, p. 141). To address this lack of training for the job, most countries have recently implemented a model of 'dual vocational formation', that is, programmes jointly developed by the government and employers by which prospect workers attend classes at a vocational organisation and receive on-the-job training at the company. However, the effectiveness of such programmes has not been widely proved. For instance, in Guatemala, there is evidence that, even if 45% of enterprises enrolled young practitioners for dual formation, only 20% of those were hired after concluding their supervised professional internships (ASIES, 2014, p. 4).

asymmetries that are not necessarily explicit. The idea that what occurs in the workplace 'in practice' matters more for JQ than it does the body of legislation on labour rights has also been raised for the case of some European countries. CIPD (2015), for instance, reported that employees in the UK do not enjoy legal rights or protections as strong as those in Germany, Italy or France, yet their national average on 'quality of employment' is better.

To better capture these institutional nuances, a series of semi-structured interviews were conducted with local representatives from the state sector, employers, trade unions, NGOs and academia (see Chapter 4 on methodological considerations). Taking advantage of the ex-post nature of this exercise, interviewees were asked if the JQ rankings seemed reasonable to them – based on their knowledge in the field of labour policies – and which institutional factors may be playing a role in the observed – or lack of – differences, according to their view. The following paragraphs are focused on three points that were repeatedly mentioned in those interviews and for which there is some literature to dialogue with: the varying capacity of LISs, the regulatory role played by the state amid economic liberalisation, and trade unions actions.[96]

Capacity of workplace inspection

Do the JQ rankings reflect the capacity of workplace inspection systems in each country? From the perspective of efficiency of resources, the data presented in Chapter 3 indicated that Panama, El Salvador and Costa Rica had more capable LIS in terms of the number of actions per inspector as well as in terms of the number of workers inspected. Such numerical efficiency may have to do with Costa Rica ranking better in many JQ dimensions, but the same cannot be stated in the case of El Salvador.

The following is a quote from an NGO representative, who was asked to rank the six Central American countries according to the capacity and professionalization of their LIS. The interviewee's knowledge on the subject, derived from a project conducted in 2012 by the NGO, which aimed, precisely, at strengthening Central American LISs. The match between the expert's account and our IJQ ranking was notable:

> "Panama has the most modern and professional inspection system nowadays, after carrying out a comprehensive renovation process. It is followed by Costa Rica, which used to have the strongest system and the best economic resources, but they have been lacking the necessary professional resources, together with a lack of vision and innovation to administer those resources. Nicaragua is perhaps in third place, with a

[96] The ILO and other international organisations have profusely analysed many institutional aspects that could be considered relevant determinants of job quality at the country level. Due to space and resources constraints, it was impossible to carry out in one single chapter a comprehensive analysis of all those country characteristics that could be playing a role at explaining job quality cross-country patterns. The results presented here are mainly based on the revision of official reports, triangulated with data from the interviews.

> very strong administration but with highly partisan political ideologies. Then, reflecting a very different Central America, we can place Honduras, Guatemala and El Salvador. (…) In El Salvador, there is a very strong and conservative organisational culture that slows down any attempt to improve the inspection systems." (NGO, CRI)

Yet, the efficiency of the inspection institution does not seem to follow the same cross-country pattern in terms of earnings (e.g. Nicaragua still appears with the lowest average of monthly earnings despite having a relatively strong inspection institution), nor in terms of WTQ (e.g. jobs in Guatemala and El Salvador rank within the top half in this regard, despite having comparatively least capable inspection systems). The apparently closer association between the capacity of LISs and IJQ might well be explained by the fact that labour inspectors in Central America tend to prioritise the inspection of hygiene, health and safety at work; all aspects that directly reflect on the physical environment component of IJQ. Moreover, the very low score of El Salvador in the physical environment index back in 2011, matched with the fact that the country was one of the latest to update a General Law on Prevention of Risks in Workplaces (Decree Law No. 254).[97]

Also, LISs in Central America have put efforts on the inspection of minimum wage compliance, which may reflect on a higher score in the quality of earnings. However, policy efforts to improve payment of minimum wage appeared to be stronger in Costa Rica, which in 2010 launched a powerful national campaign to strengthen inspection over this type of infractions. This type of institutional actions was more frequently mentioned by interviewees from all sectors in Costa Rica, arguing that the minimum wage policy helped to improve compliance by 10%, something that may well indicate Cost Rica's top performance in terms of earnings.

A second sort of recurrent reports were about the qualitative differences in the levels of professionalization and transparency of labour inspectors which, according to the interviewees, had a direct effect on the efficacy of law enforcement. The exposure of inspectors to bribes and corruption was most commonly commented among Guatemalan and Honduran experts in contrast to the transparency more frequently associated to the LIS of countries like Costa Rica and Panama. The following quotes from representatives of the labour ministries of Guatemala and Costa Rica – both recently appointed – are illustrative of this stark difference in approaches, even if they rather denote a political discourse:

[97] It is likely that the positive effects on the Salvadoran law on JQ will be reflected on a future measure. Indeed, the latest Statistical Yearbook of the Salvadoran Labour Ministry indicated that, in 2016, almost 70% of the amounts collected for imposing fines corresponded to violations to the new law; whereas in 2011, less than 2% of the money collected in terms of fines came from violations to the Health and Safety Rule. Rather than a rise in incidents, these figures suggest a differential in the effectiveness of inspection action and a response to better awareness of how to report environmental risks in the workplace.

> "Changing bureaucratic mind sets is going to be extremely complex because corruption was a way of life, not only for the current ruler, but also for those in administration and even those below. Our labour inspection system has had that stigma for many years, due to the unfortunate behaviour of some inspectors, not all of them though" (Government, GTM)

> "…The LI operates with a zero-tolerance policy on corruption among inspectors; all the complaints are accepted, investigated and to date has not been found a single case in which corruption has been proven." (Government, CRI)

In turn, the higher job security and stability enjoyed by human resources in the Costa Rican LIS explains part of their higher capacity in relation to other countries. In Costa Rica, labour inspectors are protected by the civil service regime, as well as being the only country where the legislation requires that inspectors are law professionals (PEN, 2008, p. 166). In Nicaragua, as well, inspectors belong to the civil service career since 2004, yet despite not being politically designated, the institution is said to be "highly partisan", possibly limiting their effectiveness in securing job quality standards.

Further country specificities on LIS were found, not particularly in terms of the number of inspections and human resources, but in the sanction or preventative approaches taken. Just as documented in Chapter 3, it was widely commented in the interviews that Costa Rica and Panamanian LISs lack coercive power to impose fines directly. Instead, the responsibility to sanction violations on labour legislation lies on the judicial power. Interestingly, it seems that this lack of sanction power has not had a detrimental effect on working conditions. One hypothesis is that these LISs are pushed to adopt a preventative role. Indeed, Costa Rican and Panamanian interviewees reported to have worked in the reinforcement of the preventative role of their LISs, either through incentive-based programmes of certification for employers, or circulation of information about the compliance with labour laws. Yet, the lack of authority to rectify faults continues to be a cause of concern for authorities in these countries, since it increases procedural bottlenecks. On the contrary, in El Salvador, Nicaragua, Honduras, and most recently in Guatemala, labour inspectors are entitled to impose fines, unfortunately with a very limited effect in practice due to pecuniary penalties remaining too low as to dissuade employers to violate the law (Ciudad Reynaud, 2010).

Corporate Codes of Conduct and State role amid economic openness

Jobs in Free Trade Zones (FTZs) or in Export Processing Zones (EPZs) are often associated with low wages, high work intensity, long hours in unsafe working conditions, lack of inspection and antidemocratic labour practices. Given that Central American countries have been increasingly expanding FTZs as a strategy to attract FDI, interviewees were asked about the active or passive role played by the state to protect workers' conditions amid economic liberalisation.

From the information in Chapter 3 and the country rankings obtained, it can be established that Panama and Costa Rica scored among the highest levels of IJQ despite having the largest inflows of TNCs and FDI. This result led us to consider the capacity of their states to open their economies without worsening the intrinsic quality of their jobs. Our results evidence that an indicator of the volume of FDI is not necessarily an indicator of worst working conditions. JQ at the aggregate level could be affected by the intensity of economic openess and foreign investment, 'in conjuction with' the role played by the state towards the protection of workers' rights. From the interviews, it was evidenced that countries like Nicaragua and Honduras have adopted more aggressive strategies to attract FDI that are likely to negatively reflect in the pay and WTQ dimensions of JQ, respectively. For instance, to some experts, in the last decade the Nicaraguan state has actively undermined workers' rights in pursuit of attracting foreign investment, leading labour regulations to a process of "involution". The FTZ regime has expanded to such an extent that has created a "parastatal bourgeoisie" with massive fiscal benefits, alternative wages system, and too flexible working time organisation,[98] an interviewee claimed (Labour Lawyer and former government representative – Nicaragua). Moreover, having the lowest statutory minimum wage in the continent is also deemed part of the pro-investment kit to keep costs as low as possible and remain competitive against neighbour countries, as shown in this quote by an NGO representative:

> "It is true that the policy of attracting investment has partly made use of that condition, that labour is relatively cheap compared to other countries, it is a way of exploiting comparative advantages, and that has, indeed, attracted investment. That should be added to the fact that Nicaragua is one of the countries – perhaps the safest country – in Central America. That, plus cheap labour ... well, the cost of energy is expensive here, but it pays off with cheap labour and the low percentage of absenteeism that Nicaraguan workers have." (NGO, NIC)

To similar purposes, Honduras – which not only ranks low in WTQ but also in terms of IJQ and earnings – was the first country in the isthmus to legalise a system of hourly work; which legal experts said to have played an important role in attracting foreign investment, especially in the sector of call-centres that benefit from flexible arrangements.[99] In the case of Panama, interviewees also mentioned the existence of deregulatory practices in the organisation of working time that suit employers' interests; which is consistent with Panama's lower ranking in the WTQ index. Representatives of trade unions in Panama insisted that the stark increase of transnational corporations, and foreign investors in the country have led to an extension of working hours as well as a generalised loss of workers' autonomy to organise their working time.

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[98] In Nicaragua, the 4x4 flexible shift was legalised for FTZs since 2012.

[99] Certainly, though, a similar relaxation of labour legislation in Honduras has not been seen in terms of wages, whose legal minimum continues to be the highest in Central America.

Another interesting issue was that the low IJQ in the Northern Triangle, matched a discourse about the weaker state capacity to protect worker's rights in those countries, particularly freedom of association. In turn, the weakness of their states appears to be 'compensated' with a more vigilant role of foreign investors in those countries. As the following quote denotes, the case of the U.S. complaint against Guatemala placed in 2008 (see Chapter 3) is the most recent example of how local governments can have a passive role in protecting workers' rights in a context of increased economic openness, including how foreign consumers demand higher compliance with international agreements. Just in 2015, the ILO announced its intention to establish a Commission of Inquiry to review Guatemala's non-observance of the fundamental right of freedom of association. According to experts, this is the highest sanction possible (it must be reminded that a similar complaint was filed against Honduras in 2012):

> "[The CAFTA-DR sanction] reflects that the country hit rock bottom on non-compliance and lack of knowledge on labour rights. The establishment of the Commission of Inquiry is the worst thing that can happen to a state (...) The only good thing that this has generated is more conscience, more pressure to stay alert." (Labour Lawyer, GTM)

The following brief quote also illustrates this compensating role of foreign investors in the case of El Salvador. Government, employers, and workers' representatives all stated that having the U.S. as trade partner has contributed to raising working standards in the apparel sector; while diversifying the productive industry. Moreover, inspection in occupational health and safety has been intensified since the ratification of the CAFTA-DR, up to the point of issuing a new law on the subject. In one of the interviews to a local NGO it was pointed out that:

> "The codes of conduct of the [international] brands can be more protective and guaranteeing than the national law itself." (NGO, SLV)

It was interesting to note that the effects of Free Trade Agreements (FTAs) and Bilateral Investment Treaties (BITs) on working conditions of the Central American workforce varied depending on the origin of the economic partner. In this regard, the investment of Asian countries, although much smaller compared to western countries, was frequently associated with lower enforcement of labour standards in contrast to the more vigilant role deployed by the United States and Canada. An employers' representative in El Salvador narrated that since the 1990s there was a *maquila* boom with massive influx of Korean investors that turned out to be investments "of very poor quality" and highly unstable. Guatemala also entered in strong competition with El Salvador, Honduras and Nicaragua to attract foreign investors in the apparel industry, but those from China and Korea resulted rather "intensive" as well as "short-lived". These industries were paralleled to more recent Indian investments in call-centres, in that "their business usually last only 5 years before relocating to countries with cheaper labour costs." A labour lawyer in Honduras shared the idea that Chinese and Korean investments were of

strong extractive nature, much less respectful and ignorant of national labour rights. The same claim was made by an NGO representative in Costa Rica: the country also had several Korean investments in the apparel sector in the recent past, but most of their operations were banned due to the unacceptable working conditions they used to promote. In contrast to other countries of the isthmus, the strong regulatory atmosphere experienced in Costa Rica was early manifested when the adherence to the CAFTA was put to a popular vote through a plebiscite and the response at that time was one of rejection (see Rayner, 2014 on this topic).

The cases described mainly help illustrating how during the last decade of economic globalisation some Central American states have adopted a more passive role in workers' rights protection, which has been compensated by a more vigilant role of foreign partners or consumers. This matches with Guatemala's, Honduras' and El Salvador's lower IJQ rank.

Trade Unions and institutionalised labour social dialogue

Do the rankings follow from trade unions capacity to protect workers' rights? According to the literature, it could have been expected that average JQ was higher in those countries where unions have both more representation and negotiating power. However, as evidenced in Chapter 3, the quantitative capacity of unions in Central American countries is not as powerful as to have a substantive impact on the average quality of jobs. Still, some qualitative differences were elicited from interviewees' discourses that could be associated with Panama's and Costa Rica's higher scores in the earnings and IJQ dimensions.

For instance, against the countries of the North, union representatives in Panama and Costa Rica reported to have a more inclusive agenda of vindications. This diversification of Panamanian and Costa Rican trade unions was shown, first, in terms of including more youth, female and informal workers in their lines. But there was also evident a diversification of the aspects of work trade unions cover in their negotiations and affirmative actions, which tend to go beyond the economic and physical environment dimensions. On the contrary, unions in the Northern countries continued to deploy a rather 'survival' approach. The following is a quote from a Union representative in El Salvador which fairly reflects the reluctance of the labour movement to adapt to the demands of the modern labour market:

> "Today nothing is questioned, there are no referents and there is no theoretical construction around the question of what labour relations we want (…). They [unions] do not demand training, they only claim for economic things such as wages. Everything else – education, housing, leisure time, etc. – is vaguely addressed. There is no reflection within the movement on these issues and there is no understanding of people resources management beyond the pay dimension." (Union Leader, SLV).

Certainly, as advanced in Chapter 3, there is a differential in terms of the scale of anti-union sentiments and factual persecution that also reflects on the worst JQ rankings of countries like Honduras and

Guatemala, against Panama and Costa Rica. In Panama, interviewees acknowledged the relatively high impact level achieved by major industrial unions in improving workers' economic and training conditions. For instance, the largest industrial trade union SUNTRACS (Spanish acronym for National Union of Workers of the Construction Industry and Similar), was said to successfully negotiate a single minimum wage for the whole of the construction sector that is well above the statutory minimum. Unions in the port industry in Panama, which is also an expansive source of employment, achieved significant percentage increases in their minimum wages by means of collective bargaining.

On the other hand, the low union density rate in Costa Rica is likely to conceal the existence of other institutionalised labour organisations that, according to interviewees across sectors, have played a central role in improving some dimensions of JQ in the country. The so-called *solidarista* associations, are a legal form of workers' organisations born after the civil war in Costa Rica in the late 1940s, inspired by the Catholic principles of 'solidarity', 'social justice' and 'harmonious' employment relationships. They currently represent the largest category of workers' organisations in the country[100]. Different to trade unions, they are comprised of blue- and white-collar workers, together with management representatives. *Solidarista* associations work as mutualist or credit institutions, funded by deductions from workers' wages and employers' contributions. They aim at finding direct arrangements surrounding matters of wages, health and safety and piece-rates, along with providing all sorts of social, cultural and leisure activities. Despite most interviewees in Costa Rica had a questioning attitude towards the protective role of the *Solidarista* movement, they bluntly recognised their success in improving economic conditions of salaried workers.[101]

6.5 Summary

Considering the differences in the economic, social and political background of the six countries compared, it was foreseeable that we would find certain international asymmetries in JQ levels. In section 6.1 it was demonstrated that JQ varied substantively across Central American countries in terms of both earnings and intrinsic job features; while the differences in the quality of working time were less noticeable. The more substantial country effect in pay is consistent with the literature, as is the smaller variation on WTQ.

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[100] According to the data from the Costa Rican Labour Ministry (MTSS, 2011), at the time when the ECCTS was conducted there were 190,442 workers affiliated to trade unions (equivalent to 9.6% of the total working population), against 271,980 workers affiliated to *solidarista* associations (equivalent to 18% of the *salaried* working population).

[101] One of the main criticisms interviewees made against *solidarista* associations was that the financial contribution of employers hinders workers' autonomy to defend their collective interest. The second problem is that, even if employees represent the majority of votes and power to negotiate on other substantive working conditions or to defend collective workers' rights, these institutions must involve the voice and presence of representatives of employers in the Board of Directors, also diminishing workers' power to negotiate on other substantive working conditions. In 1993, the ILO itself issued a resolution declaring that *solidarista* associations must not assume the representation of workers' collective interest and "not interfere in the activities and functions of trade unions" (275th report of the ILO Committee on the Freedom of Association, Case 1483, Costa Rica, 1993), especially when it comes to negotiations on wages and conditions with employers.

The comparative analysis in section 6.2 was aimed at exploring how Central American nations would rank among a more far-ranging sample of countries with economic and social backgrounds as diverse as those between Costa Rica and Honduras. The results obtained looked reasonable and novel at the same time. On the one hand, the way all Central American cases clustered at the bottom end of the earnings scale is consistent with the substantial differences in GDP per capita between both regions (perhaps the only dimension of JQ for which more background information is available). On the other, even if IJQ is not a subject for which much information has been composed and gathered, the fact that cases like Cosa Rica rank as high as the Netherlands, or that El Salvador ranks as low as Turkey in this index, demonstrates the enormous usefulness of Green and Mostafa's multidimensional measures.

The general depiction of JQ in Central America as of 2011 is one where Costa Rica often presented the highest averages of JQ, while Honduras tended to locate at the opposite extreme. But it was also found in section 6.3 that countries' performance varied depending on the dimension of JQ analysed. For instance, while Panama could offer high paying jobs to a large share of its workforce, there is more to be accomplished regarding the provision of better working time arrangements that are more conducive to work-life balance. The multidimensionality that the concept of JQ intends to grasp was confirmed in section 6.3, revealing that the three grand indices of JQ – earnings, WTQ and IJQ – do not correlate among each other as strongly as to be redundant. Of further interest was to discover that in Central American countries, the economic benefits of work are not cumulative with other amenities on a macro-level. Quite the contrary, it seemed that the level of earnings compensates for disadvantages related to working time and intrinsic job characteristics. Although such compensation effect is not necessarily desirable from a normative and capability viewpoint, it does seem plausible in the context of developing countries: where the higher level of unsatisfied economic needs results in a workforce that is more willing to compromise other amenities in favour of a higher salary.

The cross-country analysis of JQ was deepened in section 6.4, with the purpose of further validation and interpretation of the differences – or similarities – in JQ between Central American countries. First, we ruled out that the international differences observed were not an artefact of countries' different industrial or occupational composition. Then, looking for country-specific factors that could be playing a role in the relative capacity of countries to provide good quality jobs, it was thought-provoking to find that countries' GDP per capita does not always determine such capacity: the only dimension of JQ that can be directly associated with a country's socioeconomic development was the level of earnings. Similarly, it was confirmed that not all dimensions of JQ derived from conventional development indicators such as poverty rates, unemployment, or size of the informal sector. Precisely, here lies the contribution of Green and Mostafa's indices: in that it helps to broaden a narrow conception of JQ towards other worker-centred features of the working life commonly omitted.

The last part of section 6.4 was aimed at taking one step further in the validation process by discussing if the international scores of JQ obtained were consistent with countries' institutional capacity in the field of labour regulation and protection. As suggested in Chapter 3, it was found that, if related at all, the average JQ of a country is less dependent on the existing body of regulation, as it is on the tangible capacity to enforce such legislation. The interviews conducted in this regard pointed out to the essential role played by labour inspection systems, trade unions and even by the state. Some countries like Costa Rica showed more institutional capacity than others to implement their labour laws, and such differential is likely to play a part in JQ asymmetries on average. Without assuming any causality, the case of Costa Rica is noteworthy, since it suggests that good quality jobs can be created without necessarily constraining workers' rights and, in turn, without hindering economic development.

Overall, the results of this chapter stress on the feasibility and usefulness of comparing JQ across countries for public policy purposes. It ought to be reminded that in Central America there are no statistical records against which we can compare the results obtained. On the one hand, this means that the current comparative analysis is a clear contribution to the body of literature. On the other, it means that all results should be interpreted with heedfulness since there are limitations to determine whether the patterns that differ from the evidence in other world regions are genuinely different in Central America or the result of measurement errors. Such caveats are intrinsic to a majority of international comparative analyses involving developing countries with a lower budget for data collection.

Thus far, the indices have proved to capture all the differences we expected, perhaps only underestimating those related to WTQ. This index involves a trade-off: on the one hand, it simplifies information in a single average score that is easier to communicate and replicate; on the other, it reduces the variability between countries because of the opposing way in which their components behave. However, as long as such cancelling-out effect occurs similarly across countries, the comparative purpose of the index is still accomplished. Other caveats regarding the existing associations between specific working time aspects and workers' well-being will be discussed in the following chapter.

7 How significant is it to have a good job for a worker's well-being?

This chapter addresses the third research objective about the association of JQ with the well-being of Central American workers. I start by evaluating the correlation between each index and the well-being outcomes introduced in Chapter 4, emphasising on country differences when appropriate. Secondly, I explore more closely the interrelations between the WTQ dimension and health. Thirdly, expanding the previous point, I compare the associations between WTQ and well-being obtained in Central America, to those obtained among low-income European countries, to determine whether these correlations are region-specific. Lastly, I examined the effects of working in the informal sector or informal employment on Central American workers' well-being, as compared to the effects of working in a bad quality job, with the purpose of highlighting the usefulness of a multidimensional JQ model against the conventional informality approach promoted in Latin America.

The principal aim throughout the analyses was to confirm that what is defined as "job quality" is truly determinant of workers' physical and mental health, regardless of the social and cultural context where the indices were measured. Thus, instead of focusing on the explanatory power of the overall models, the emphasis has been placed on whether each job factor has a significant positive contribution to the outcomes, and whether such job features influence well-being more than a traditional indicator of labour informality.

Given the cross-sectional nature of the data examined, the results presented here must be interpreted with the precaution of not assuming any causal mechanisms. In some cases, the possibility of reverse causality between JQ and health is challenging to rule out. The scientific literature often warns about the selection bias or 'healthy worker effect' (Li & Sung, 1999). Such theory claims that the observed improvements in individuals' physical and mental health are not the result of working under better working conditions, but of healthier workers being more likely to be selected or predisposed to perform the best jobs (e.g. jobs with a higher level of autonomy afforded or with more complex and creative tasks). The selection theory even posits the possibility that workers that are less mentally and physically

fit for work are not adequately represented in the sample because of their higher likelihood to be denied the opportunity to work. Regardless, the selection hypothesis is likely to explain only part of the well-being differences observed. In this regard, the research often provides evidence in favour of the causal effect of bad jobs on health disparities, having accounted for the health selection effect (e.g. Burgard & Lin, 2013).

7.1 Job quality effects on workers' well-being

One of the avenues that Green and Mostafa took to demonstrate the validity of the set of indicators they proposed, was to describe the positive correlations between their JQ measures and different well-being variables gathered in the Fifth EWCS (e.g. self-reported quality of life, subjective work-life balance, and physical health). As anticipated, the authors confirmed that the four grand dimensions of JQ – earnings, prospects, IJQ and WTQ – were significantly and positively associated with the well-being of European workers. Nonetheless, they also found that the contribution of each factor to the overall variability of workers' well-being was not very substantive. On the whole, the magnitude of the correlations they found did not surpass 0.34 (the strongest association being that of IJQ with subjective well-being).

There are some explanations in advance to the small magnitude of these correlations. The most logical reason is that individuals' well-being is affected by multiple other aspects of life not explicitly related with the characteristics of their jobs and that are difficult to control for with the available data. These factors may include from personality treats, to genetic makeup and characteristics of the physical, social and cultural environment. It is also established beforehand that the impact of certain job inconveniences such as working long hours, receiving a low salary, or being exposed to radiation, will not only reflect on individual workers' immediate well-being but also in the well-being of their partner and dependents, or in the worker's long-term health status.

That said, we do not expect to find correlations of a large magnitude either, but we do imagine that the three indices computed with the ECCTS data correlate positively with some health outcomes of Central American workers. The ECCTS collected four self-reported well-being measures that allows us to verify this, namely: self-perceived general health, mental health, musculoskeletal illness and other physical illness[102]. Using the three JQ indices as explanatory variables, I fitted four multivariable regression models, one for each well-being outcome, at the regional level. The models were adjusted for gender and age groups, two demographic factors that are known to be correlated with well-being.

[102] See methodological Chapter 4 for details on the operationalisation of health indicators.

Table 7.1. ECCTS 2011: associations between health and JQ

	Self-reported health (Ordered logistic)		Mental health (OLS)		Musculoskeletal illness (Poisson)		Other physical illness (Poisson)	
	β	SE	β	SE	β	SE	β	SE
Log (Earnings)	.405***	(.020)	.247***	(.020)	-.128***	(.008)	-.130***	(.009)
IJQ	.161***	(.018)	.410***	(.019)	-.239***	(.007)	-.186***	(.008)
WTQ	.061**	(.019)	-.059**	(.019)	0.006	(.008)	-.020*	(.008)
Constant			9.821***	(.037)	-.115***	(.018)	-.162***	(.019)
N	10,848		10,923		10,936		10,936	

Note: *p < .05; **p < .01; ***p < .001. The table displays the unstandardized (b) and standardized (β) regression coefficients for each predictor, with standard errors in parenthesis. Gender and age accounted for.
Source: author's elaboration from ECCTS 2011.

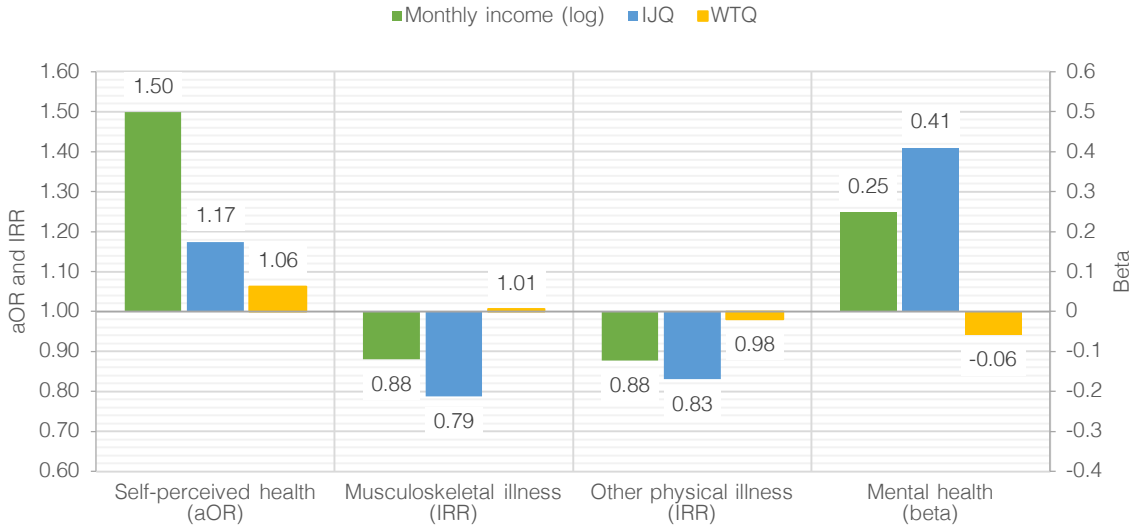
The resulting standardised regression coefficients are shown in Table 7.1. As imagined, workers with higher earnings and better intrinsic job conditions reported, on average, better self-perception of general health, a fitter mental state, and a lower number of musculoskeletal or other physical disorders.[103] Though weakly, the quality of working time also explained part of the variability of workers' self-perceived health (at 99% confidence level) and the number of physical diseases (at a 95% level). Yet, contrary to expectations, having a working time organisation that is more conducive to work-life balance was associated with worse average mental health among Central American workers (at 99% confidence level). Some explanations to this puzzling result are discussed in section 7.2.

Consistent with Eurofound's results (2012), the correlations between JQ and well-being in Central America were somewhat weak. For example, the most relevant predictor of mental health was IJQ, but the correlation between both variables was rather small ($r = .18$, $p < .001$), yet of comparable magnitude to the one found in the European sample between IJQ and the WHO-5 index ($r = .25$, $p < .001$).[104] Even if we are not looking at exactly the same health outputs, the rest of the relationships in Central America appeared somewhat weaker than those reported in Eurofound (2012).

By comparing the magnitudes of the regression coefficients in Table 7.1 it is also possible to have a conception of which job features are more closely associated with workers' well-being. Being that the three JQ indices were measured in different units, these needed to be normalised to a common scale. The comparable coefficients are expressed as *beta* (β), standardised to have a $M = 0$ and a $SD = 1$. Thus, the *beta* coefficients express the variations of log (earnings), IJQ and WTQ in terms of standard deviations. This simple exercise allows us observing, for instance, that the salary is relatively the most important dimension of work to explain variations in self-reported health. Mental health, on the other hand, resulted more strongly affected by intrinsic characteristics such as intensive work effort, autonomy, and the quality of the physical and social environment.

[103] Although the association between earnings and the reduction in the average number of musculoskeletal and physical illness is in the direction expected, it is presumably a spurious correlation.
[104] Presumably, the 5-WHO correlates strongly with the 12-GHQ captured in the ECCTS, therefore, we can expect a more direct comparison in that regard. Both correlations were computed considering sampling weights.

Figure 7.1. Strength of associations between job quality and workers' health



Note: the figure displays the aOR and IRR computed as exponential betas e^{β}, where β corresponds to the standardised regression coefficients of the three JQ indices on self-perceived health, musculoskeletal illness, other physical illness and occupational accidents. Mental health effects are expressed as standardised regression coefficients betas (β), in the secondary axis. Empty bars represent no statistical significance ($p > 0.05$).
Source: author's elaboration based on Table 7.1.

To ease interpretation, Figure 7.1 provides a graphical illustration of the magnitude of the effects of each JQ index on the different health outcomes. For self-perceived health, the effects were expressed in terms of adjusted odds ratio (*aOR*); for musculoskeletal and other physical diseases, the effects were expressed in incidence rate ratios (*IRR*); and since mental health is a continuous variable, its effects were expressed simply in terms of *beta*. The IJQ indicator (represented by the blue bars) resulted the most important contributor to three out of four well-being outcomes. These results support the hypothesis that approaches to JQ which focus on the wage dimension exclusively are too narrow as to account for all the job characteristics that can objectively influence workers' well-being.[105] On the other hand, short yellow bars illustrate the relatively small contribution of WTQ to each aspect of workers' health, as well as the unexpected negative effect on mental health (inverted yellow bar).

To examine whether JQ presented the same strength and direction of health effects throughout the isthmus, Table 7.2 includes the standardised regression coefficients stratified by country. Replicating the previous exercise, the standardised effects by country were plotted in Figure 7.2 to ease interpretation. These were expressed in terms of *beta* (β) or exponential beta (e^{β}) according to the regression technique used.

[105] Interestingly, in Europe, in none of the well-being outcomes analysed, earnings resulted the main contributor. This was to be expected considering the literature on JQ. Therein is suggested that the higher impact of the pay dimension in countries with smaller welfare states, is because such income covers health and pensions costs that are not provided by the state as part of the social security system. If these social risks were decommodified, as in many Scandinavian countries, then probably the impact of earnings on workers' well-being would be smaller (MDB et al. 2011:69).

Table 7.2. ECCTS 2011: associations between job quality and health by country

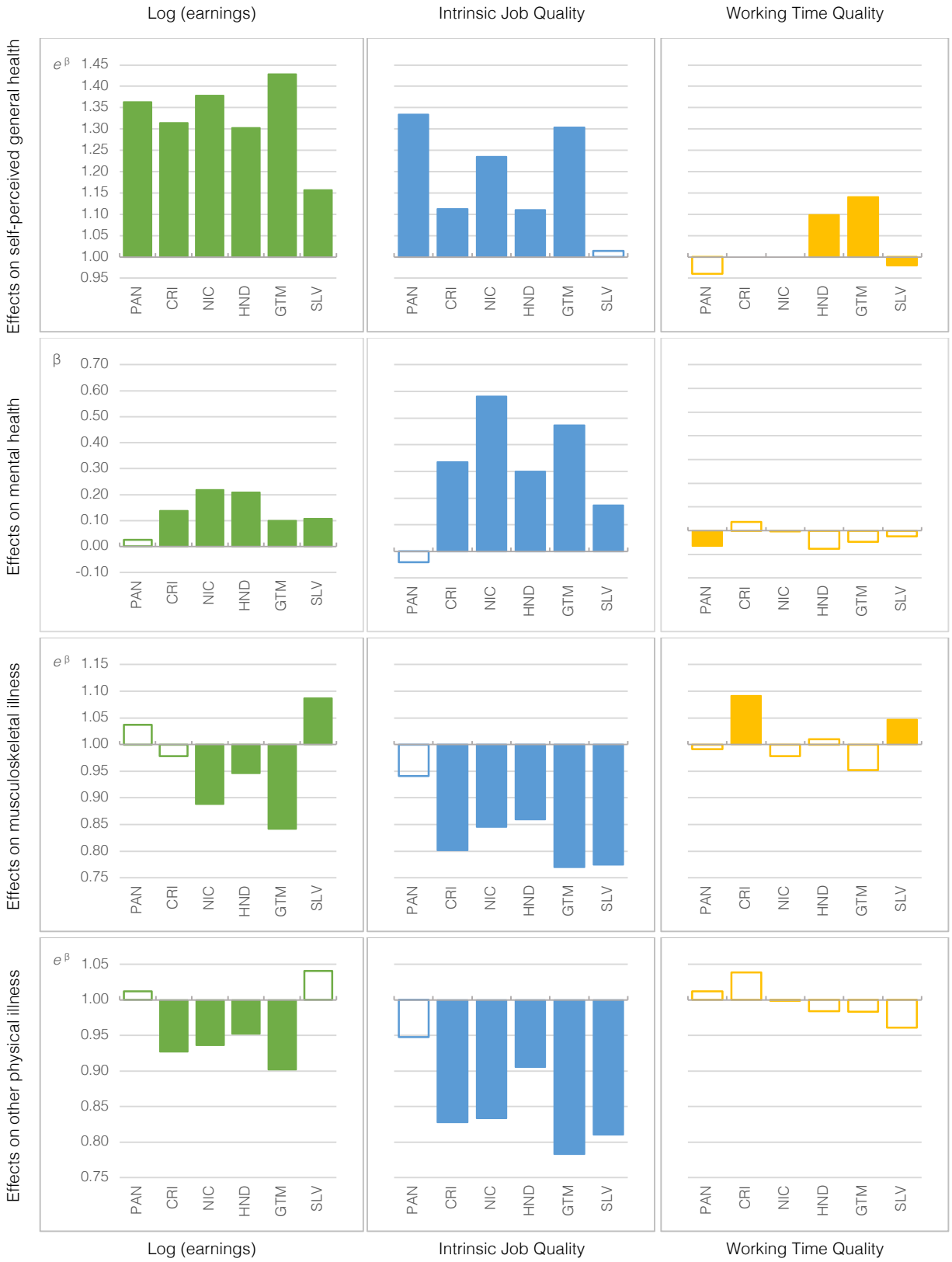
	Self-reported health		Mental health		Musculoskeletal illness		Other physical illness	
	Ordered Logistic		OLS		Poisson		Poisson	
Panama	β	SE	β	SE	β	SE	β	SE
Log (earnings)	.310***	(0.050)	0.025	(0.025)	0.036	(0.030)	0.012	(0.028)
IJQ	.288***	(0.051)	-0.041	(0.026)	-0.061	(0.031)	-0.054	(0.029)
WTQ	-0.040	(0.050)	-.064*	(0.026)	-0.009	(0.031)	0.012	(0.029)
Observations	1,900		1,914		1,916		1,916	
Costa Rica	β	SE	β	SE	β	SE	β	SE
Log (earnings)	.273***	(0.051)	.137**	(0.052)	-0.022	(0.025)	-.076**	(0.025)
IJQ	.107*	(0.050)	.335***	(0.050)	-.221***	(0.024)	-.189***	(0.024)
WTQ	0.000	(0.053)	0.037	(0.053)	.088***	(0.027)	0.038	(0.027)
Observations	1,419		1,393		1,393		1,393	
Nicaragua	β	SE	β	SE	β	SE	β	SE
Log (earnings)	.321***	(0.045)	.219***	(0.043)	-.118***	(0.017)	-.066***	(0.017)
IJQ	.211***	(0.044)	.581***	(0.042)	-.168***	(0.016)	-.182***	(0.016)
WTQ	0.000	(0.043)	-0.002	(0.042)	-0.022	(0.016)	-0.001	(0.017)
Observations	1,975		1,982		1,982		1,982	
Honduras	β	SE	β	SE	β	SE	β	SE
Log (earnings)	.264***	(0.044)	.208***	(0.043)	-.055**	(0.018)	-.049**	(0.018)
IJQ	.105*	(0.044)	.300***	(0.042)	-.151***	(0.018)	-.099***	(0.018)
WTQ	.094*	(0.042)	-0.077	(0.041)	0.010	(0.017)	-0.016	(0.018)
Observations	1,994		1,991		1,996		1,996	
Guatemala	β	SE	β	SE	β	SE	β	SE
Log (earnings)	.357***	(0.049)	.099*	(0.049)	-.172***	(0.024)	-.103***	(0.022)
IJQ	.265***	(0.047)	.473***	(0.048)	-.261***	(0.022)	-.245***	(0.020)
WTQ	.132**	(0.049)	-0.047	(0.050)	-0.049	(0.025)	-0.017	(0.022)
Observations	1,643		1,647		1,650		1,650	
El Salvador	β	SE	β	SE	β	SE	β	SE
Log (earnings)	.146**	(0.045)	.107*	(0.051)	.083***	(0.015)	0.040	(0.021)
IJQ	0.014	(0.043)	.173***	(0.050)	-.256***	(0.014)	-.210***	(0.019)
WTQ	-0.020	(0.044)	-0.025	(0.050)	.046**	(0.015)	-0.040	(0.021)
Observations	1,998		1,996		1,999		1,999	

Note: *p < .05; **p < .01; ***p < .001. The table displays the standardised regression coefficients (β) for each predictor, controlling for gender and age. Standard errors are in parenthesis. All estimates at the country level were calculated including a weighting factor that corrected for sample probabilities in terms of gender, age and economic sector differences.
Source: author's elaboration from ECCTS 2011.

First, looking at the green bar charts it is more easily verifiable that the effect of earnings on self-reported health, mental health, musculoskeletal and other physical conditions was positive in all six countries with few exceptions: in El Salvador, the effects of wages tend to be relatively smaller than in other countries (and negative for musculoskeletal diseases, although probably a spurious association). In Panama, the contribution of earnings to well-being was generally not meaningful; except on the subjective perception that workers have about their own health.

Second, the impact of IJQ (represented in the blue bar charts) was also positive and similar in magnitude in every country with the exception, again, of Panama and El Salvador. In the former, the effect of having good intrinsic working conditions was only substantive for workers' self-reported health. In El Salvador, instead, self-reported health was the only well-being outcome for which IJQ was not statistically determinant. In every country, IJQ is the main determinant of mental, physical and musculoskeletal health.

Figure 7.2. ECCTS 2011: associations between job quality and health by country



Note: non-statistically significant relationships ($p > 0.05$) are represented by empty bars.
Source: Table 7.2

Third, the weak association between WTQ and well-being outcomes observed at the aggregate level was replicated across the majority of countries, as it can be seen in the majority of empty yellow bars. The only cases where having a better organisation of working time was significantly associated with better self-reported health were Honduras and Guatemala. In all the other few cases where WTQ played a statistically significant role in workers' health, this one was surprisingly negative.

Worthy of attention is that in Panama the expected impact of wages and IJQ was clearly smaller than in other countries. One explanation to consider, is that in Panama most participants scored very high in well-being levels, thus decreasing the probability that the JQ indices yield significant. An example of such ceiling effect is that more than half of respondents in Panama reported the maximum score of mental health, whereas in all the other countries the proportion of workers who did so was less than 20%. Similarly, in Panama less than 2% reported to have 3 or more musculoskeletal conditions, whereas in the other Central American countries this proportion was in a range of 10% to 40%.

7.2 Why is better working time weakly or negatively associated with well-being?

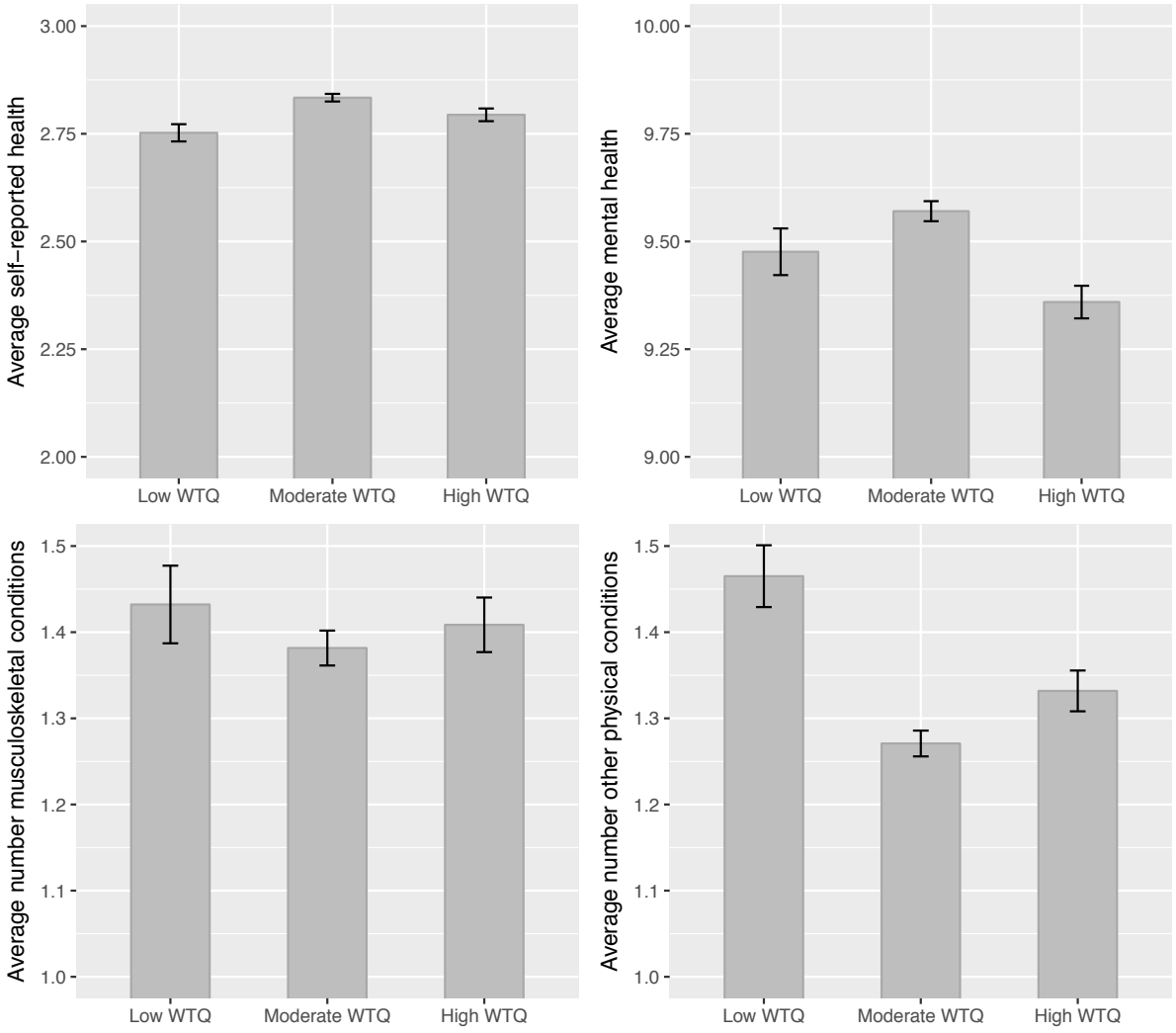
The regression results obtained earlier were somewhat puzzling regarding the WTQ index, for in most cases there was no association with health, or its effect was opposite to the one imagined. Although it is within expectations that some aspects of JQ are not strongly correlated with workers' well-being, hitherto the evidence regarding the validity of the WTQ index in Central America is somewhat weak. The current section is, therefore, aimed at revising the assumptions and methodological decisions underlying the construction of this specific indicator of JQ.

One possible explanation is that optimal well-being is only achieved at moderate levels of WTQ. A simple way to test such hypothesis is by converting the continuous WTQ index into three levels of equal range – low, moderate and high – and graphically assess the differences in means of the three groups, as shown in Figure 7.3. Therein it appears that the highest level of general self-reported health, mental well-being, musculoskeletal and physical condition occurs, certainly, at medium levels of WTQ. However, the error bars help to see that the difference in means were statistically meaningful only in two cases: self-reported general health and the number of physical problems.

For a more accurate testing of a potential curvilinear association between health and WTQ, Table 7.3 presents the regression results obtained after introducing a squared term of this predictor[106].

[106] Before squaring the scores of WTQ, these were centred (subtracting the mean WTQ from each score) to reduce collinearity.

Figure 7.3. ECCTS 2011: mean health scores by level of WTQ



Source: author's elaboration from ECCTS 2011.

These figures indicate whether the quadratic term accounts for a significant variability in health, holding the effects of earnings, IJQ, gender and age constant. The squared effect of WTQ was significant in relation to self-perceived health and other physical illnesses only. In the first case, the perception of workers' own health increased as they reported better working time conditions, and after a certain point such relationship reversed. Similarly, the number of physical problems decreased as WTQ improved, but at higher levels of WTQ the number of physical afflictions increases again. The association between WTQ and mental health, instead, continued to prove weak in the Central American context.

A more detailed exploration can be done by disaggregating the WTQ index to check whether there are specific components that are not relating with well-being in the way theory states. It is possible that working shorter hours, with traditional weekday schedules, or being able to adapt shifts to domestic demands does not have such a positive effect on the well-being of Central American workers as it has in Europe. It also may be the case that, as originally designed, the index is comprised of items with opposing health effects, cancelling each other out (e.g. in Chapter 6 it was observed that in some countries time discretion correlated negatively with other components of the same index).

Table 7.3. ECCTS 2011: curvilinear associations between WTQ and health

	Self-perceived health (Ordered logistic)		Mental Health (OLS)		Musculoskeletal illness (Poisson)		Other physical illness (Poisson)	
	β	SE	β	SE	β	SE	β	SE
WTQ (centred)	.070***	(.019)	-.054**	(.020)	.008	(.008)	-.023**	(.008)
WTQ (centred)^2	-.066***	(.019)	-.035	(.020)	-.015	(.008)	.028***	(.008)
IJQ	.161***	(.018)	.410***	(.019)	-.239***	(.007)	-.186***	(.008)
Earnings (log)	.402***	(.020)	.245***	(.020)	-.128***	(.008)	-.129***	(.009)
Constant			9.819***	(.037)	-.117***	(.018)	-.160***	(.019)
N	10,848		10,923		10,936		10,936	

Note: *p < .05; **p < .01; ***p < .001. The table displays the standardised regression coefficients (β) for each predictor, with standard errors in parenthesis. Gender and age effects accounted for.
Source: author's elaboration from ECCTS 2011.

Table 7.4 shows the regression coefficients resulting from regressing each health measure on the components of the WTQ index (length of working hours, weekend shifts, night-time shifts, control over working schedules and short-term flexibility), controlling for earnings, IJQ, and demographics. Note that the items about discretion over working time and short-term flexibility were only collected for employees, thus the number of observations included in the model was reduced to nearly a third of the original Central American sample. In what follows, the results of Table 7.4 are analysed in conjunction with the plots of Figure 7.4 to Figure 7.8, which contain the mean health scores at each level of the WTQ components, controlling by country.[107]

Work duration

The first thing revealed when the index was deconstructed is not only that some aspects of WTQ had an effect contrary to the expected, but also that in many cases such effects were not meaningful. For example, work duration was weakly or not at all associated with three out of four health outcomes, and while it did yield a significant effect on mental health, the direction of it was rather surprising: working longer hours per week was associated with better mental health. Perhaps, the only asseveration that can be held with confidence is that working over 20 hours a week proved beneficial for workers' mental health, but it is effortful to identify a threshold after which mental health starts to be negatively affected due to extensive work.

Departing from our evidence, Green and Mostafa originally assigned a decreasing score to higher numbers of working hours, considering that working less than 20 hours is the best possible scenario.[108] Such decision followed Muñoz de Bustillo's (2011) approach and was based on evidence from the European sample where, indeed, there was a negative association between working hours and well-

[107] Note that in Figures 7.4 to 7.8 the scales for the vertical *Y* axes are evidently different because they represent four different health measures. Instead, the horizontal *X* axes represent the same measures across all plots, and they were aligned to ease comparisons.

[108] Specifically, they scored usual weekly hours as 100 (under 20 hours), 75 (20 to 37 hours), 50 (38 to 41 hours), 25 (42 to 47 hours), and 0 (48 hours or more).

being "throughout the range of hours". Certainly, Green and Mostafa's criterion is also consistent with the traditional occupational health literature which suggests that working longer hours increases mental strain and exposure to work accidents because of augmented fatigue and stress. However, such a linear effect did not appear clearly in any of the Central American countries surveyed (Figure 7.4). If at all, there was a mild deterioration of Guatemalans' self-reported health as hours got longer, and perhaps also some disadvantages associated to the musculoskeletal and physical health of workers in El Salvador and Nicaragua. Yet, in all other cases, our results did not follow the theory.

Dissenting with neoclassical economic theories, it is reasonable to think that in less developed countries work is not always a disutility, therefore, working very short hours can have as a detrimental physical and mental effect as working excessive hours. In fact, some countries in Figure 7.4 presented this – yet very mild – curvilinear relationship between working hours and self-reported health (e.g. Honduras and Costa Rica) or between working hours and number of physical problems (e.g. in El Salvador, Honduras and Costa Rica). It is possible, therefore, that the original scoring of the work duration item is not capturing this curvilinear relationship in some countries. This hypothesis was further tested by regressing the well-being indicators on the continuous hour variable and its quadratic term[109]. The quadratic term for hours yielded significant only for the indicators of mental health ($\beta_{hrs^2} = -0.061$, $p < .001$) and number of physical symptoms ($\exp(\beta_{hrs^2}) = 1.044$, $p < .001$).

A clear negative relationship between working long hours and well-being may also be difficult to distinguish because, in contrast to part-time jobs, working very long hours is commonly associated to more successful types of jobs and occupations. This may be the case, for instance, of managers or employers who hold more responsibilities, receive better rewards, including higher salaries, better social protection packages and more promotion opportunities (Eurofound, 2013). That confounding effect can be cleared up, partly, by controlling for other job characteristics like earnings and intrinsic job quality, but also weighing in the effect of occupation. After including occupation as an additional control variable, the associations observed earlier between working hours and mental health and physical symptoms remained robust; and the expected negative impact of working long hours on musculoskeletal problems became meaningful ($\exp(\beta_{hrs^2}) = 1.043$, $p < .001$).

Weekend and night work

In the majority of cases, working during weekends was associated with poorer health. For instance, as observed in Table 7.4, those who work Saturday *and* Sunday reported significantly worst general health and more muscular-skeletal problems than people working from Monday to Friday, especially in

[109] Both terms were mean centred to reduce collinearity.

Guatemala, El Salvador, Honduras and Nicaragua (Figure 7.5). Once again, the only atypical outcome was for mental health: people working Saturday *or* Sunday had, on average, better mental health than those who never work on weekends. This was the case in Guatemala, Honduras, Costa Rica and Panama. It is likely that the better average mental health of those who work Saturdays or Sundays is an artefact of the safer physical environments associated to jobs in the retail and service sectors that are more frequently performed on weekends. Comparatively, people in construction and traditional factories may work only from Monday to Friday, but are exposed to higher physical risks. In fact, after controlling for occupation and industry, the unusual positive correlation between weekend work and mental health became weaker.

On another dimension of scheduling, night or irregular shifts have been typically associated to higher risks of chronic disease compared to day shifts workers, essentially due to higher caffeine and total calorie intake, or sleep deprivation as it is often the case of health care assistants, guards, receptionists and warehouse operatives (Ramin et al., 2015). However, in Central America, night work did not yield meaningful negative associations with any of the four health measures (Table 7.4). The plots of Figure 7.6 confirm that in most countries, health differences between those who work at night and those who do not are not statistically significant. On the contrary, in Nicaragua and Panama, night workers reported better self-perceived health on average. Only in Guatemala and Costa Rica the results were more consistent with the general theory, because there was a higher prevalence of physical problems among night workers.

It is likely that night jobs are associated with better working conditions in other dimensions, nullifying the expected negative health effects. For instance, workers on night shifts are likely to get higher hourly payment, enjoy more autonomy in the job, or even work in physically safer workplaces in sectors that do not require complex or dangerous operations such as transport, storage or accommodation services. Notwithstanding the above, most of these compensating variables have been accounted already in the regressions and the lack of correlation persisted. An alternative that should not be discarded yet is that workers in highly populated areas with poor transportation systems feel less stressed or anxious by working during less busy schedules because they can avoid traffic and reduce their commuting time, as reported by one of the interviewees regarding Panama.[110]

As commented in Chapter 4, we must also bear in mind that the items about weekend and night work were not captured in the most accurate way in the ECCTS, for participants were not asked specifically *how often* their jobs involved night or weekend shifts. Therefore, there is reason enough to expect that

[110] Interview with academia representative conducted on December 2016, at the University of Panama.

these items are valid indicators of job quality in most contexts but not in the way they were captured in Central America.

Control over working time

As for workers' autonomy to make decisions on their working schedule, the regression results of Table 7.4 did not reveal many substantive effects on health. The only significant association found was regarding mental health, but this was contrary to expectations: the more control the worker enjoys, poorer is her mental health. Yet, once the relation was controlled by country of residence in Figure 7.7, it remained meaningful only in few places such as El Salvador and Costa Rica. These results are not at all surprising if we consider the possibility of a reversed causal mechanism: for instance, that workers who are suffering higher mental strain, depression or anxiety problems, are granted more autonomy to adapt or determine their working schedules as an alleviating response from employers. Also conceivable is the so-called 'tyranny of choice' effect, which suggests that the reduced number of choices (i.e. not having to decide ones' own working schedules) simplifies people's life, making them mentally healthier and less anxious (Iyengar, Wells, & Schwartz, 2006; Salecl, 2011; Schwartz, 2000).

Short-term time flexibility

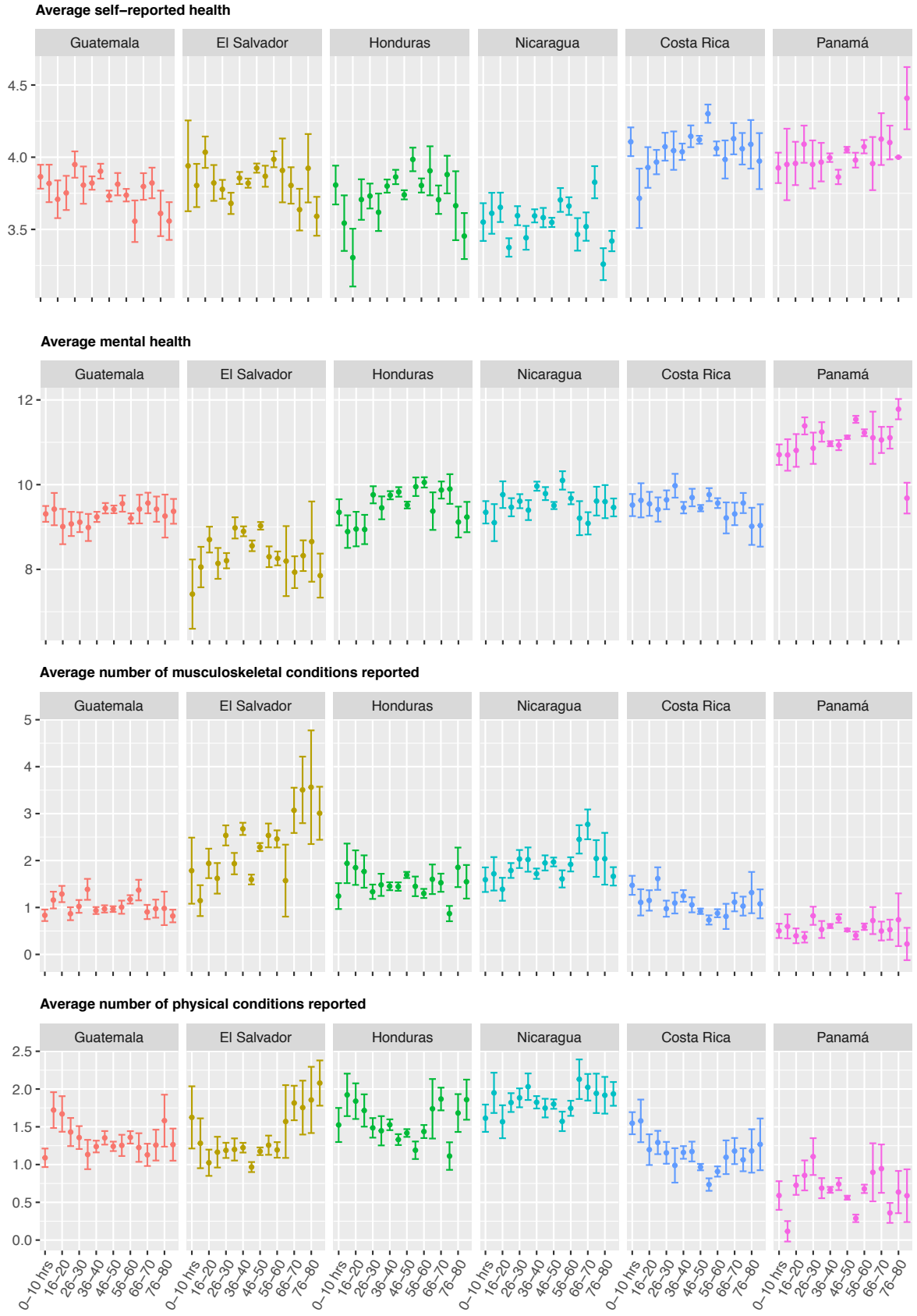
In line with the work-life balance literature, the results for Central America demonstrated that not being entitled to take a day off to attend family issues was significantly associated with worst mental health and a higher occurrence of physical conditions (Table 7.4). Moreover, after breaking down these results by country (Figure 7.8) it was revealed that in every country but Panama, workers with no right to take a day off registered lower means of mental health as well as poorer self-reported general health. In some cases, the differences were too small as to consider them statistically significant, but the graphical evidence offers a rather clear picture of the importance of short-term flexibility for the well-being of Central American workers.

Table 7.4. ECCTS 2011: unstandardized regression coefficients between health and WTQ components

	Self-reported health	Mental health	Musculo-skeletal illness	Other physical illness
	(Ordered logistic)	(OLS)	(Poisson)	(Poisson)
Working hours (ref: under 20 hours per week)				
20 to 37 hours	-.264	.470*	-.028	-.039
	(.189)	(.187)	(.089)	(.083)
38 to 41 hours	-.290	.708***	-.054	-.151
	(.184)	(.184)	(.088)	(.083)
42 to 47 hours	-.120	.479**	.140	-.169*
	(.185)	(.184)	(.086)	(.084)
48 hours or more	-.158	.454**	.126	-.143
	(.168)	(.166)	(.079)	(.074)
Weekend shifts (ref: only weekdays)				
1 weekend day (Saturday *or* Sunday)	-.147	.270**	-.193***	-.196***
	(.083)	(.083)	(.039)	(.039)
2 weekend days (Saturday *and* Sunday)	-.697***	.226	.223***	-.028
	(.157)	(.156)	(.064)	(.071)
Night shifts (ref: regular day shift or rotating without including nights)				
Evening, night or irregular shifts	-.035	-.049	-.037	.070
	(.126)	(.129)	(.062)	(.061)
Control over schedules (ref: schedules always fixed by employer)				
Often fixed by employer	.295*	-.437***	.160**	.097
	(.119)	(.119)	(.053)	(.055)
Sometimes fixed by employer	.096	-.303**	-.026	.020
	(.105)	(.103)	(.049)	(.049)
Rarely fixed by employer	.088	-.415**	-.049	-.139*
	(.132)	(.130)	(.062)	(.065)
Schedules never fixed by employer (max. control)	-.161	-.493***	-.112*	-.064
	(.105)	(.104)	(.051)	(.051)
Short-term flexibility (ref: entitled to take a day off if needed)				
Not entitled to take a day off	-.114	-.660***	.048	.117**
	(.093)	(.092)	(.041)	(.042)
Job quality				
Log (monthly earnings)	.990***	.446***	-.476***	-.285***
	(.130)	(.129)	(.060)	(.061)
IJQ	.017***	.035***	-.022***	-.016***
	(.003)	(.003)	(.001)	(.001)
Constant		6.129***	2.472***	1.793***
		(.408)	(.187)	(.189)
N	3,412	3,437	3,438	3,438

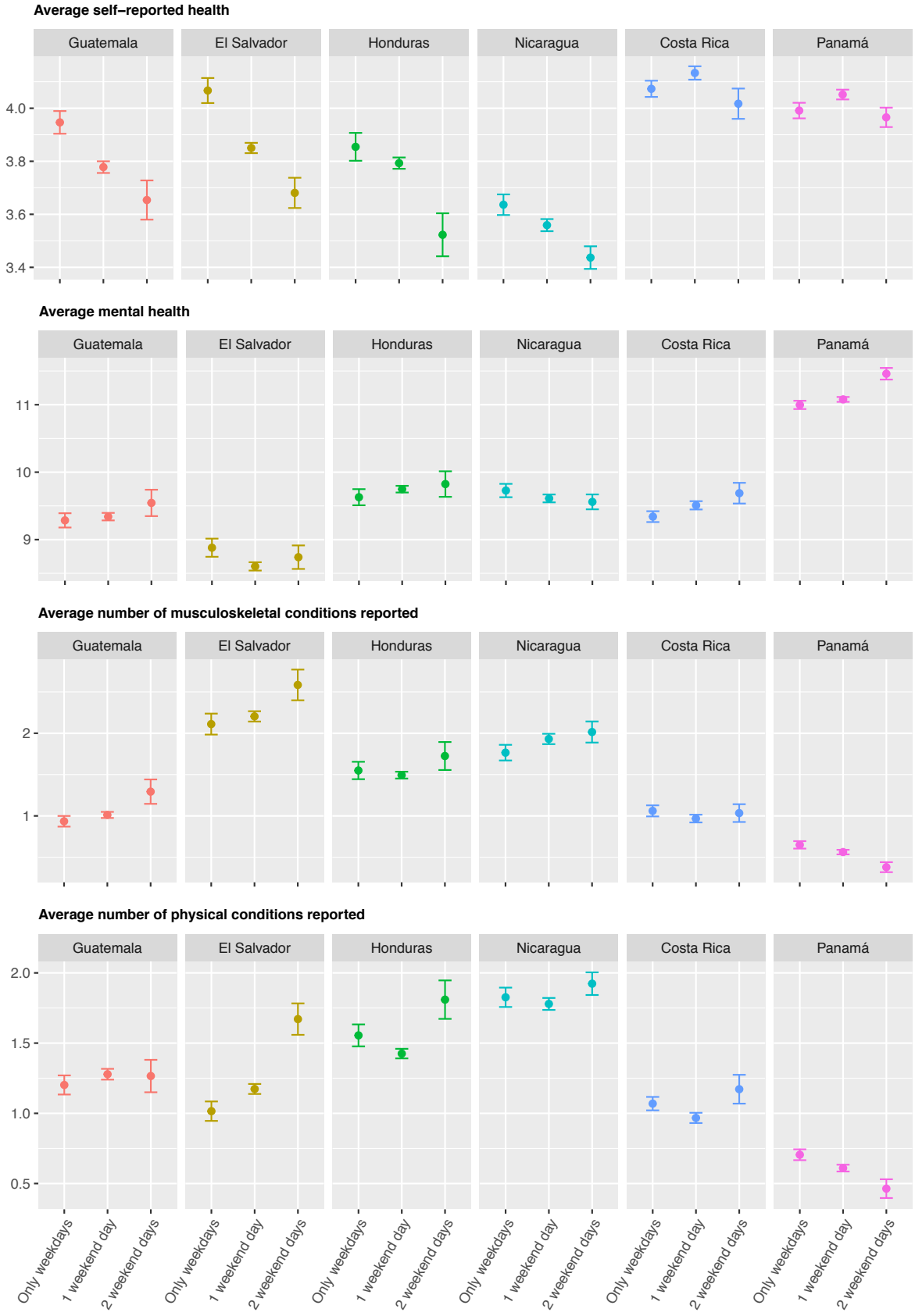
Notes: *p < .05; **p < .01; ***p < .001. Gender and age effects accounted for. Standard errors in parenthesis.
Source: author's elaboration from ECCTS 2011.

Figure 7.4. ECCTS 2011: associations between working hours and health, by country



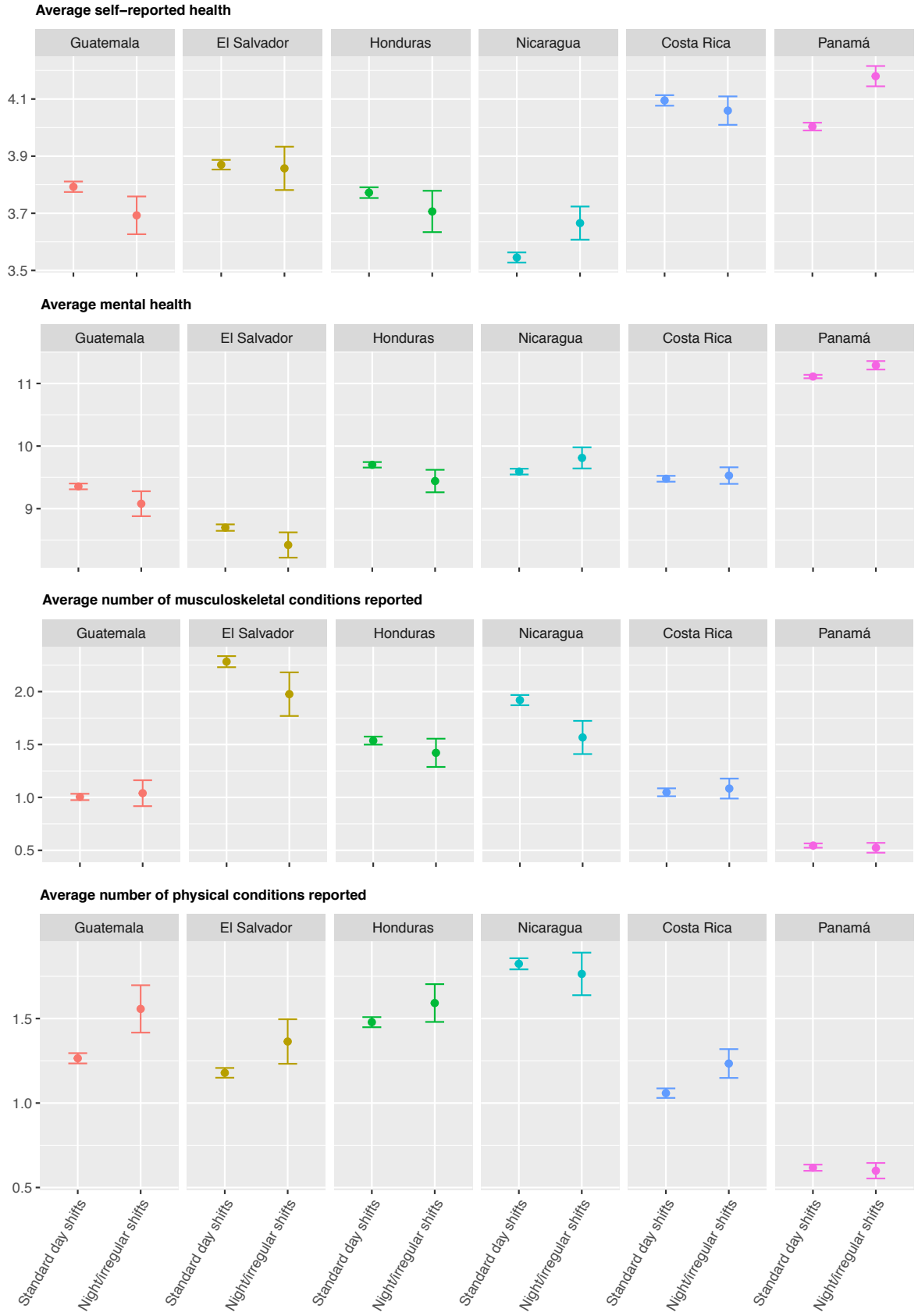
Source: author's elaboration from ECCTS 2011.

Figure 7.5. ECCTS 2011: associations between working on weekends and health, by country



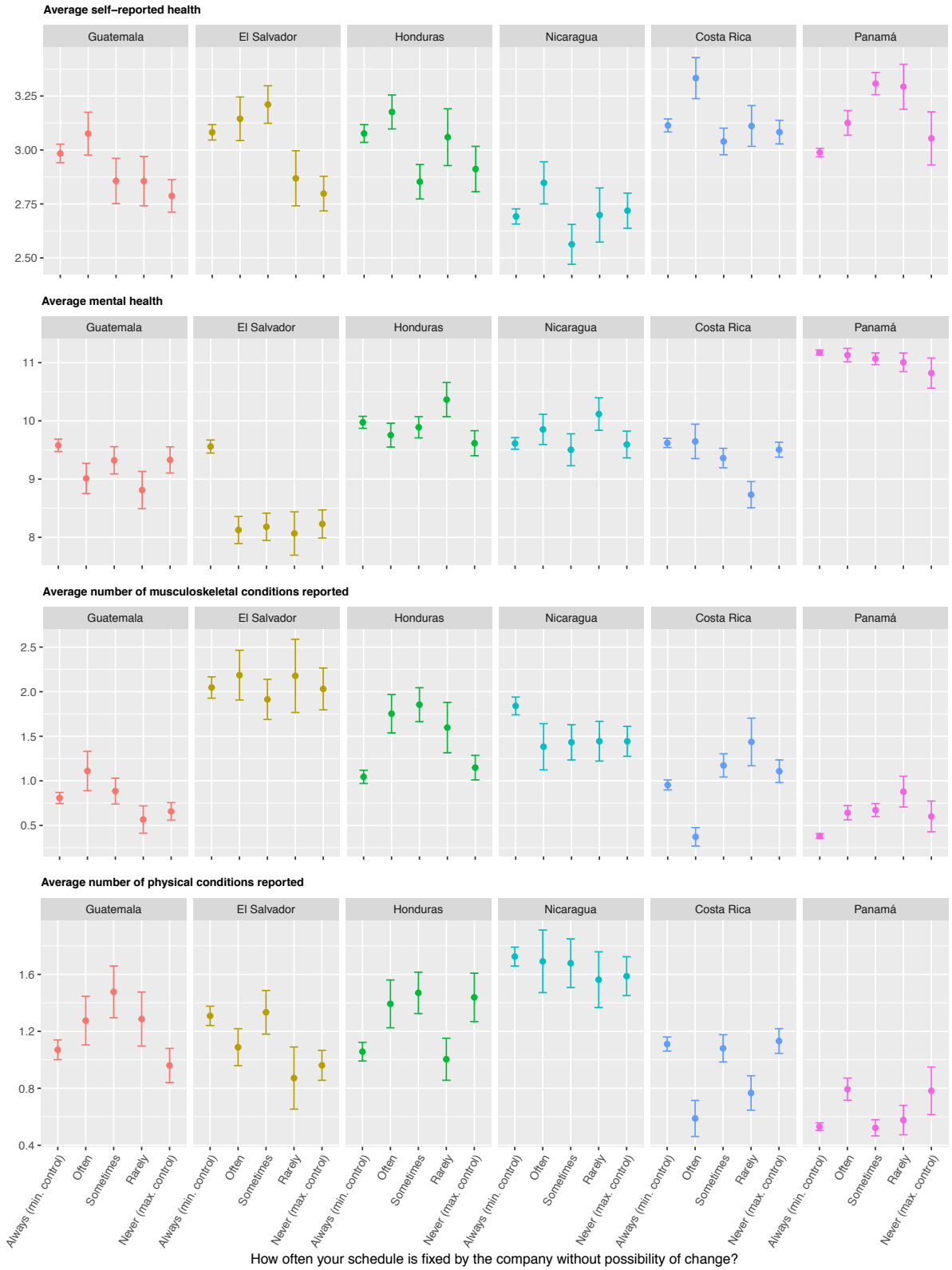
Source: author's elaboration from ECCTS 2011.

Figure 7.6. ECCTS 2011: associations between working during nights and health, by country



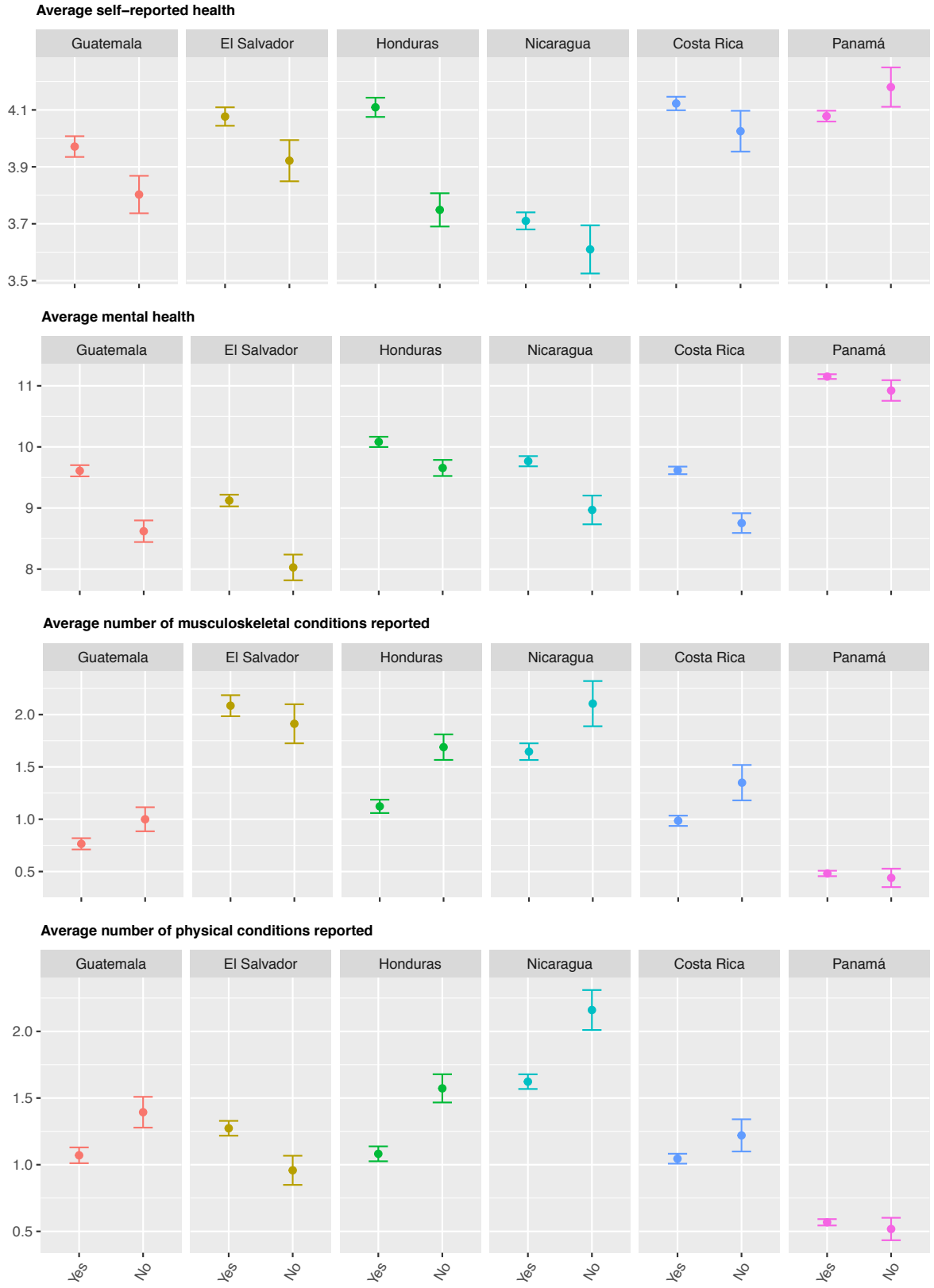
Source: author's elaboration from ECCTS 2011.

Figure 7.7. ECCTS 2011: associations between level of control over working schedule and health, by country



Note: sample includes only employees.
Source: author's elaboration from ECCTS 2011.

Figure 7.8. ECCTS 2011: associations between short-time flexibility and health, by country



Note: sample includes only employees.
Source: author's elaboration from ECCTS 2011.

7.3 Working time and well-being in Central America and Europe

To better resolve if a positive association between well-being and JQ – specifically between well-being and working time quality – can be expected across other regions too, in this section I explore how well-being and JQ factors correlate in Europe in comparison to Central America. In a broad sense, Green and Mostafa already provided sufficient evidence on the validity of their indices in Eurofound's 2012 report. However, what specifically interests us in this occasion is to test the indicators in the sub-sample of poorer European nations, and for the WTQ components more precisely.

According to data from the World Bank (2018), as of 2011, Kosovo, Albania, Republic of Macedonia, Montenegro, Bulgaria, Romania, Turkey and Latvia were the six poorest countries covered in the Fifth EWCS. As with the Central American cases, these six countries registered a GDP per capita (PPP) equal or below US$ 18,000. All the following results involve this European sample subset, of size N = 6,190.

Additionally, Green and Mostafa extracted five well-being measures from the 2010 EWCS to validate their JQ indices, namely: 'meaningfulness of work', 'subjective well-being', 'subjective work life balance', 'health issues caused by work', and 'number of health problems'. A description of their operationalisation, statistical treatment and prevalence is provided in Table 7.5. As is plain, these well-being outcomes do not match entirely the health measures collected in the ECCTS nor do the JQ indices created with each dataset, therefore, a direct regional comparison is not possible. Nonetheless, by running a similar regression analysis between JQ scales and health outcomes, it is possible to have a broad understanding on whether a multidimensional notion of 'good job' is indeed positively and 'globally' associated with well-being.

Table 7.6 presents the standardised coefficients obtained after regressing the well-being outcomes on the four grand JQ indices from the EWCS, for the 6 lowest-income countries in Europe. The figures were adjusted by gender and age groups. All things considered, the results are quite similar to those obtain in Central America. There was a high correlation between JQ and well-being where it was most expected, with few exceptions. For instance, there was a lack of association between earnings and meaningfulness of work or subjective work-life balance but, more reasonably, earnings were determinant for subjective well-being. IJQ behaved according to the theory in every dimension of health. The most notable finding was that, among the poorest countries in Europe, the WTQ index did not yield a significant correlation with the 5-WHO index of well-being, a situation that can be comparable to the very weak – and even negative – association found in Central American countries between WTQ and the 12-GHQ. Moreover, in the poorest European countries, the WTQ showed no association with the count indicator of health problems, and neither did it with the number of musculoskeletal problems in Central America. These rough similarities already suggest that the

anomalies regarding the WTQ scale discussed in the previous sections rest on a developmental issue rather than in the incapacity of the index to measure what is intended.

By looking at the standardised coefficients (β) in Table 7.6 it is also possible to have a rough idea of which job factors are the most determinant for the well-being of workers in low-income European countries, as compared to Central America. These standardised effects have been plotted in Figure 7.9 to ease interpretation. Therein it is seen that there were similarities in the relative contribution that each index had on the various well-being outcomes. For instance, in the most deprived European countries, the main factor influencing their subjective well-being (measured by the 5-WHO index) was IJQ, represented by the highest blue bar. The importance of intrinsic job characteristics in Europe is comparable to the primacy that this index had in explaining the mental health of Central American workers (measured by the 12-GHQ).

The IJQ index was also the most important factor decreasing the likelihood of believing that work impacts negatively on health, and the most important factor in lowering the number of physical health problems registered. Similarly, in Central America, IJQ was the most determinant factor to reduce the number of musculoskeletal problems and of other physical symptoms.

Of interest is the fact that the WTQ scale did not have a very substantive contribution to many of the well-being outcomes, except with 'subjective work-life balance' (represented by the highest yellow bar). The latter is not surprising, in that both variables referred to the same underlying concept of how well balanced are work and non-work activities. If at all, this result tells us that a subjective work-life balance indicator should be included in future data collections in Central America, to be used as a potential validity check. Still, the weak associations between WTQ and other measures of well-being in poor European countries resemble the evidence for Central America. All the more interesting is that for the EWCS sample, WTQ contributed relatively more than earnings to explain improvements in subjective-well-being, whereas in the poorest sub-setting, WTQ loses importance against wages to explain subjective well-being.

Table 7.5. 2010 EWCS: description of well-being measures

Item description		Descriptive statistics						Regression technique employed
		6 Low-Income			All EWCS			
		All	Male	Female	All	Male	Female	
Meaningfulness of work								
Summative index of range 0-8. Comprised by item q51h ('your job gives you the feeling of work well done') and q51j ('you have the feeling of doing useful work'), both scored with 5-point Likert scale from 'never' to 'always'.	Mean	6.8	6.8	6.8	6.4	6.4	6.5	OLS
	SD	1.5	1.5	1.4	1.7	1.8	1.7	
Subjective well-being								
Composite index of range 0-100. Constructed using items e4ato e4e which referred to the WHO-5 index: (a) 'I have felt cheerful and in good spirits,' (b) 'I have felt calm and relaxed,' (c) 'I have felt active and vigorous,' (d) 'I woke up feeling fresh and rested', and (e) 'my daily life has been filled with things that interest me'. Each statement was answered in a 6-point scale of frequency from 'at no time' through 'all of the time'.	Mean	63.2	65.8	59.7	65.4	66.2	64.4	OLS
	SD	22.1	21.3	22.7	20.8	20.7	21.0	
Subjective work-life balance								
Binary indicator derived from item q41 ('In general, do your working hours fit in with your family or social commitments outside work?'). The original 4-point scale of responses was dichotomised into values 0 ('not very well' or 'not at all well') and 1 ('very well' or 'well').	"Very well" or "well" (%)	81.6	79.9	83.3	80.4	77.9	83.7	Probit
Health issues caused by work								
Binary indicator derived from item q67 ('does your work affect your health or not?'). The original 3-point scale of responses was dichotomised into values 0 ('yes, positively' or 'no') and 1 ('yes, negatively').	"Yes, positively" or "no" (%)	66.4	65.9	67.0	74.7	72.5	77.6	Probit
Number of health problems								
Summative index of range 0-14. Constructed using items q69a to q69n ('over the last 12 months did you suffer from any of the following health problems? – hearing, skin problems, backache, upper muscular pain, lower muscular pain, headache/eyestrain, stomach ache, respiratory difficulties, cardiovascular diseases, injuries, depression/anxiety, fatigue, insomnia, other ').	Mean	2.9	2.6	3.3	2.8	2.7	2.9	Poisson
	SD	2.6	2.4	2.8	2.5	2.5	2.5	

Source: author's elaboration from EWCS 2010 and Eurofound (2012).

Table 7.6. EWCS 2010: associations between well-being and job quality in lowest income countries

	Meaningfulness of work (OLS)		Subjective well-being (OLS)		Subjective work-life balance (Probit)		Health issues caused by work (Probit)		Number of health problems (Poisson)	
	β	SE	β	SE	β	SE	β	SE	β	SE
Log (earnings)	-.007	(.022)	1.595***	(.316)	-.042	(.024)	-.054*	(.021)	.007	(.014)
IJQ	.366***	(.022)	4.048***	(.313)	.236***	(.023)	-.316***	(.021)	-.208***	(.013)
WTQ	.117***	(.023)	.143	(.329)	.303***	(.025)	-.108***	(.022)	.010	(.015)
Prospects	.171***	(.021)	4.132***	(.304)	.086***	(.023)	-.028	(.020)	-.094***	(.013)
Constant	6.584***	(.045)	73.153***	(.646)	.917***	(.049)	-.690***	(.045)	.665***	(.033)
N	5,142		5,248		5,230		5,080		5,279	

Note: *p < .05; **p < .01; ***p < .001. The table displays standardised regression coefficients (β) for each predictor, adjusted by age and gender. Standard errors are in parenthesis.
Source: author's elaboration from EWCS 2010.

Now, focusing on the dissimilarities between Central American and low-income European countries, it must be noted that earnings were not the main contributor to any of the well-being outcomes measured in Europe. Differently, in Central America, the earnings dimension was a significant explanatory factor of all aspects of workers' well-being (even if some of those associations can be considered spurious). After all, it is reasonable that salaries become more important for wellbeing as the context gets poorer and welfare states smaller.

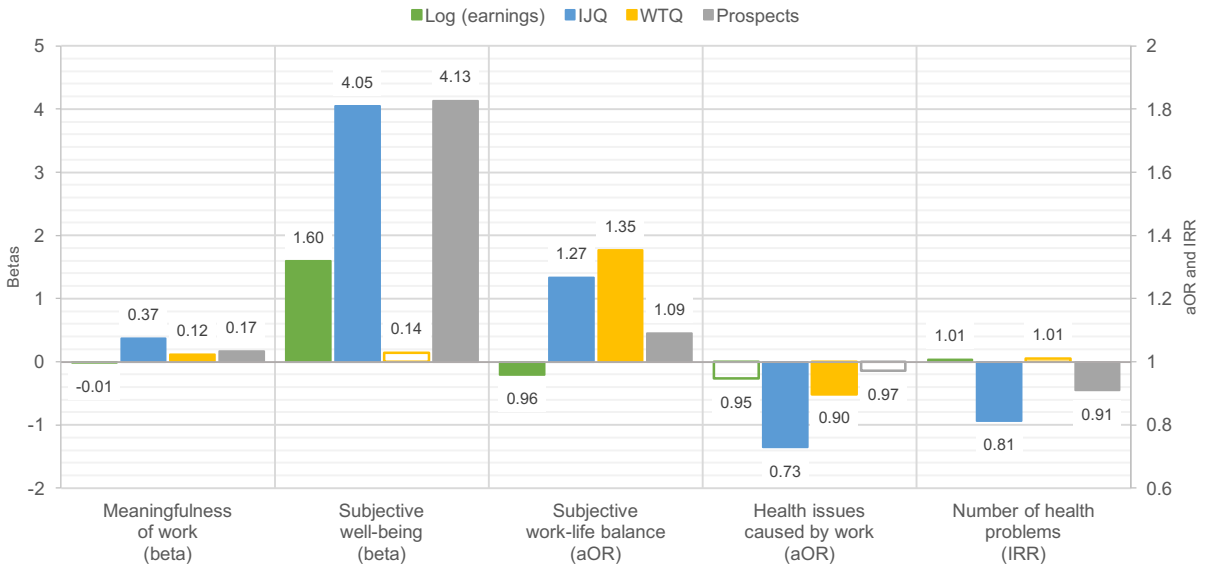
Also, the correlations with meaningfulness of work were minuscule, and so it could be expected to appear in Central America, but unfortunately the ECCTS did not collect a measure of meaningfulness. The possibility that meaningfulness was a relevant factor (rather than an outcome) of JQ is discussed in the following chapter, from a more qualitative approach.

Lastly, the significant and relatively large effect of the prospects dimension on workers' subjective well-being (highest grey bar) was novel, in that no similar relationship could be identified using the ECCTS dataset. If at all, such result simply supports the relevance of including a prospect measure in the multidimensional concept of 'good job'.

Before going onto the next section, it is worth having a closer inspection on the hypothesis of a developmental factor underlying the strength of association between WTQ and well-being. With that in mind, Figures 7.10 to 7.14 show the correlations between each component of the WTQ index, and the five well-being indicators collected in the EWCS; comparing the 6 poorest countries, against the 6 wealthiest European nations (Luxembourg, Norway, Netherlands, Ireland, Denmark and Austria, N=6,177).

In Figure 7.10, for instance, it is more clearly perceived the linear association assumed by Green and Mostafa between working long hours and some aspects of well-being: particularly on subjective work-life balance and the likelihood of feeling that work had a negative impact on one's own health. Such associations were strong in both low- and high-income European countries. For the other three well-being outcomes, no negative impact was evidenced.

Figure 7.9. EWCS 2010: Associations between job quality and well-being, in the 6 lowest-income European countries



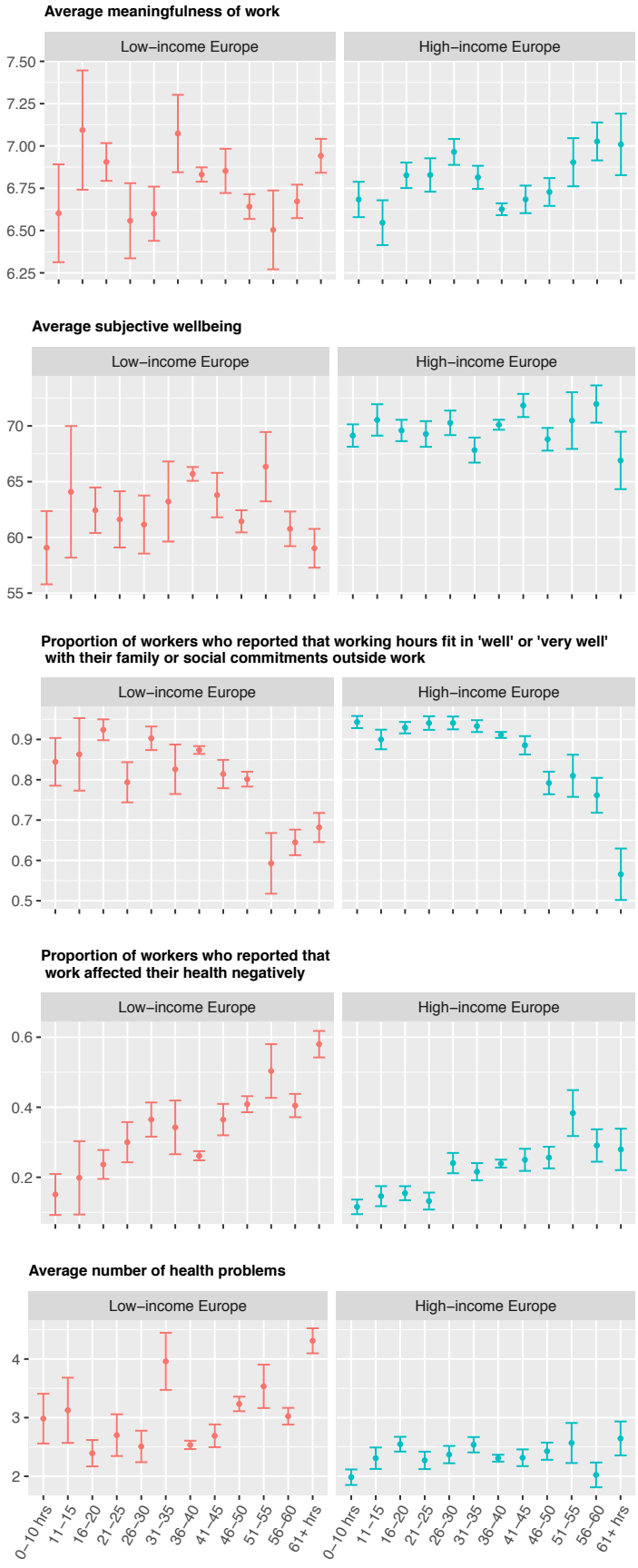
Note: the figures represent the standardised regression coefficients betas (β) of the four JQ indices on meaningfulness of work and subjective well-being; and the exponential betas (e^{β}) on subjective work life balance, health issues caused by work and number of health problems. Empty bars represent no statistical significance.
Source: author's elaboration based on Table 7.6.

Then, Figure 7.11 confirms that working during evenings or night shifts is negatively associated with poorer well-being. In the case of low-income countries, this was particularly noticeable regarding the increase in the number of health problems and the perception that works impact negatively on health; whereas in high-income countries the disadvantages were more strongly perceived in subjective work-life balance; both very different well-being outcomes.

Consistent with the scoring criteria used by Green and Mostafa in their WTQ index, Saturday and Sunday shifts were negatively associated with most well-being indicators, particularly, with subjective work-life balance; the probability of seeing one's health affected by work and the number of physical problems reported (Figure 7.12). The effects were slightly larger in low-income European countries. Of interest is that high-income countries behaved more as Central American nations in that weekend work did not have the expected negative effect on the 5-WHO index (subjective well-being), just as it did not have it on the 12-GHQ in Central America.

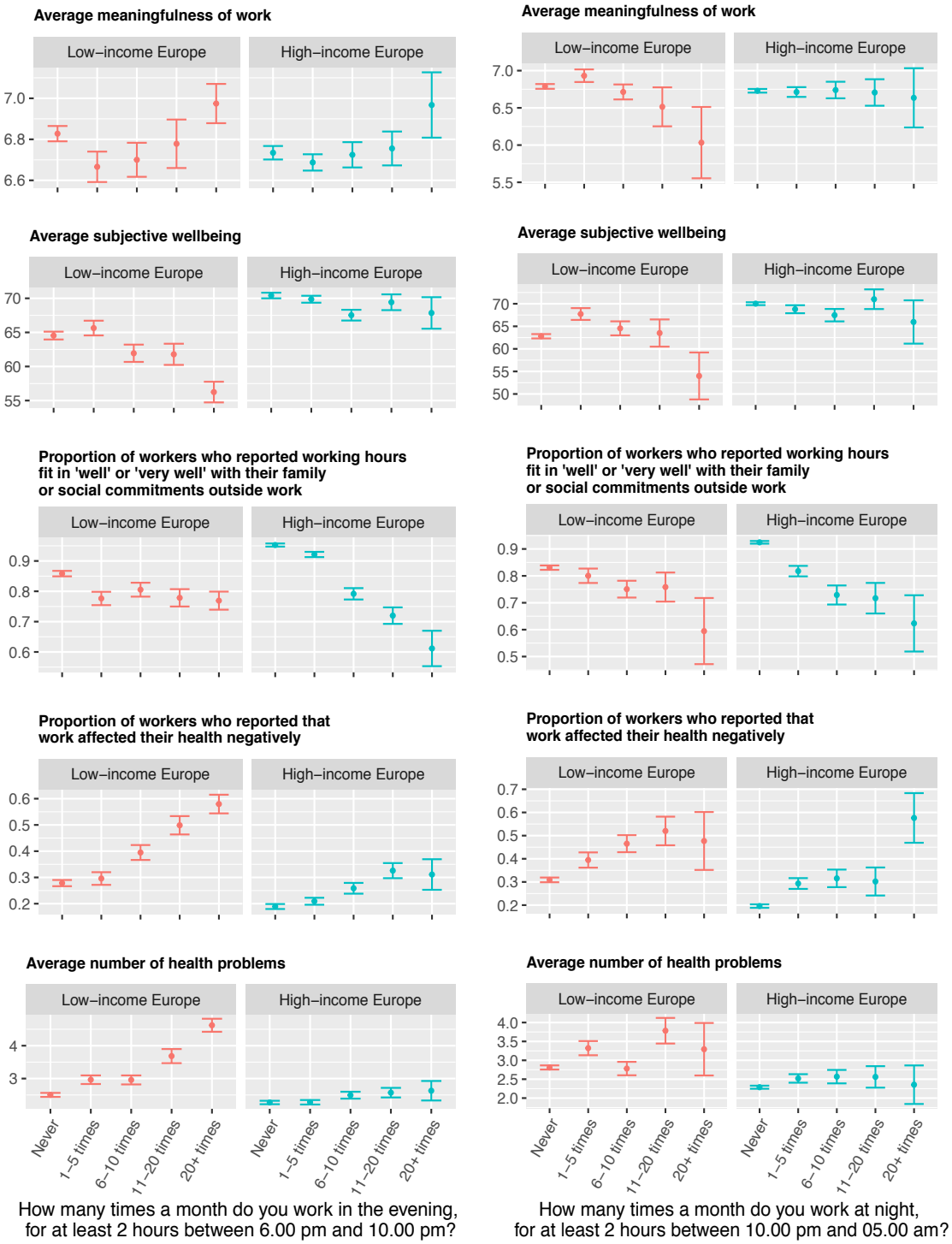
Different to the highest-income countries, greater autonomy to organise working schedules seemed negatively associated with subjective work-life balance in poorer countries (Figure 7.13), which reminds us of the 'tyranny of choice' effect found in Central America too. Enjoying a certain short-term flexibility to take an hour off from work resulted more closely associated with all dimensions of well-being, especially in high-income countries and more markedly regarding subjective work-life balance (Figure 7.14).

Figure 7.10. EWCS 2010: associations between working hours and health, by country income group.



Source: author's elaboration from EWCS 2010.

Figure 7.11. EWCS 2010: associations between evening or night work and health, by country income group

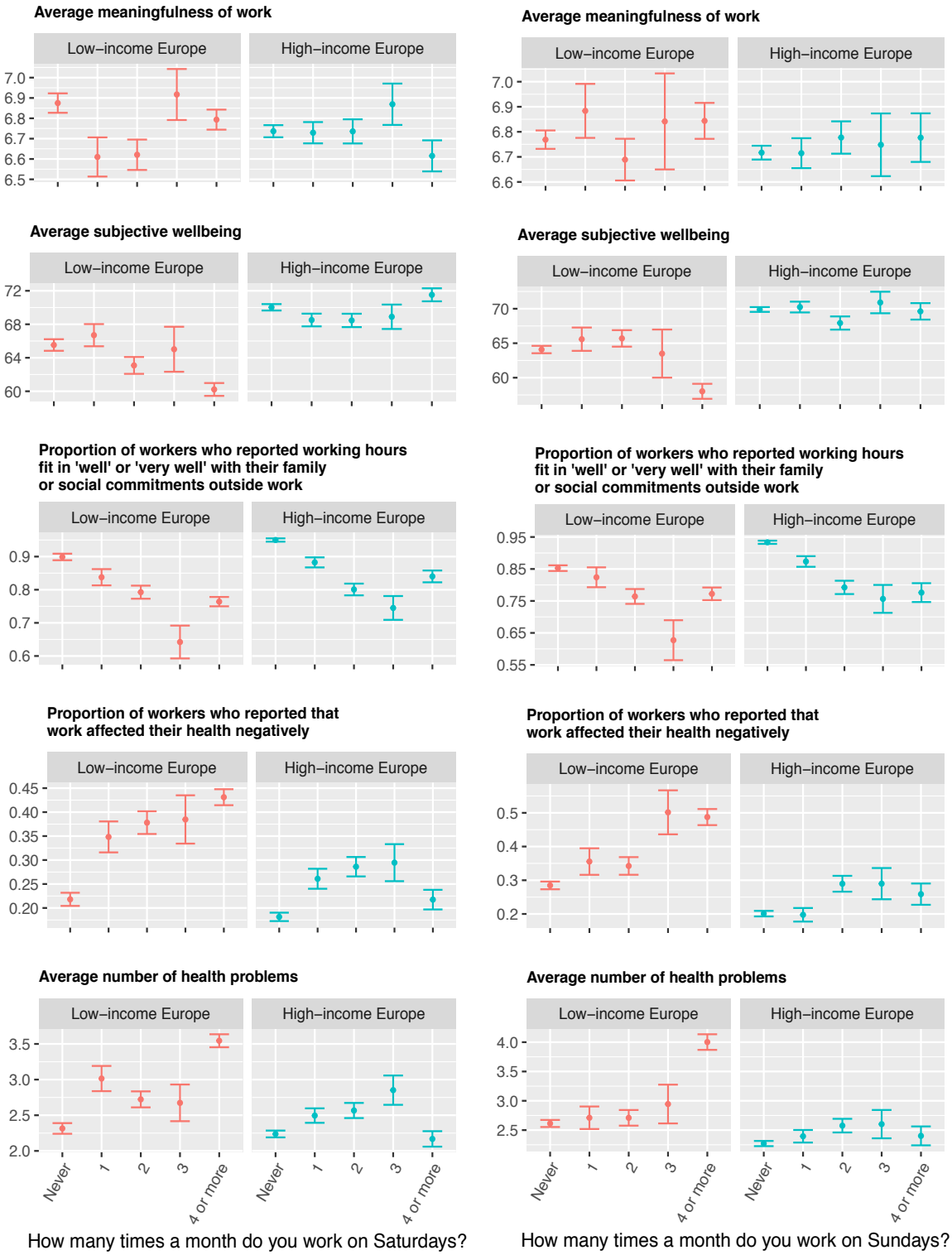


How many times a month do you work in the evening, for at least 2 hours between 6.00 pm and 10.00 pm?

How many times a month do you work at night, for at least 2 hours between 10.00 pm and 05.00 am?

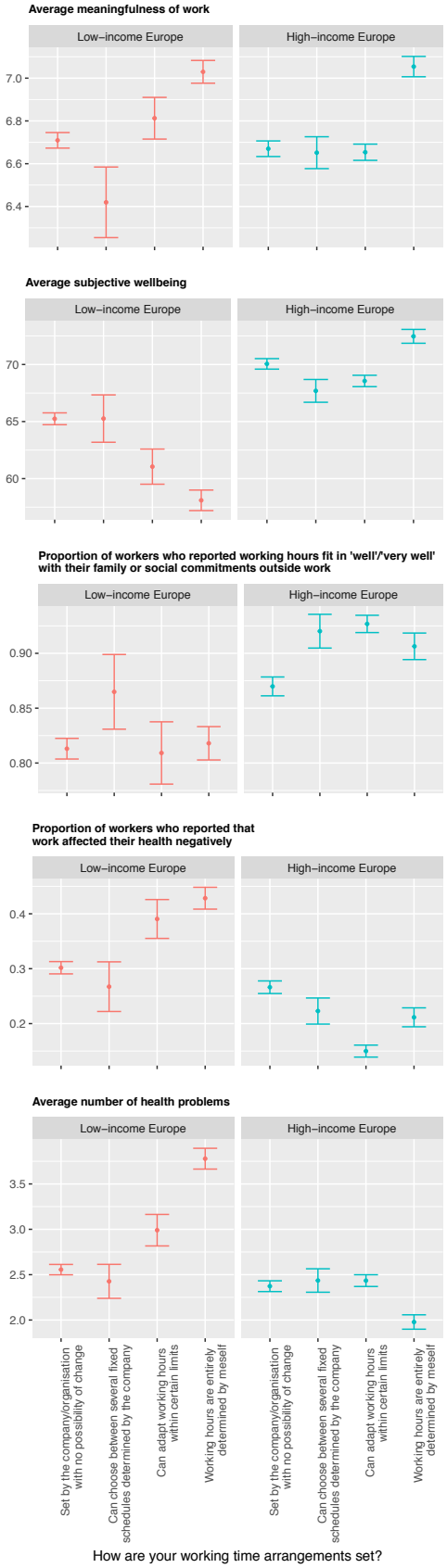
Source: author's elaboration from EWCS 2010.

Figure 7.12. EWCS 2010: associations between weekend work and health, by country income group



Source: author's elaboration from EWCS 2010.

Figure 7.13. EWCS 2010: associations between working time control and health, by country income group



Source: author's elaboration from EWCS 2010.

Figure 7.14. EWCS 2010: associations between short-term flexibility and health, by country income group

Source: author's elaboration from EWCS 2010.

7.4 Comparing well-being effects of job quality and labour formality

The analytical exercise undertaken in this chapter has shed light on the extent to which the aspects considered constitutive of a good job are related to workers' well-being, while informing whether and how these JQ indicators can be improved with the data at hand. In this regard, one aspect of working life becomes of special interest in Central American countries: labour formality.

For a long time, Central America has been internationally known as a region characterised by high rates of labour informality, figures that seem to be stagnated or increasing, rather than vanishing, as some modernisation theorists suggested. Particularly, Guatemala, Nicaragua, Honduras and El Salvador present the highest records of labour informality (PEN, 2016). Therefore, it is worth questioning whether formality indicators continue to be accurate enough to assess the quality of jobs and the associated workers' well-being as opposed to Green and Mostafa's holistic JQ approach.

To this purpose, several models of multivariate regression were fitted, using formality (sector and employment based measures) and JQ scales (earnings, IJQ, and WTQ) as predictors; and four health indicators as independent outcomes (mental health, self-reported general health, musculoskeletal illness and other physical illness).[111] This exercise allowed us comparing the strength of the relationships between well-being and both types of predictors – JQ versus labour formality. All the models were checked to discard multicollinearity using variance inflation factor (VIF), and adjusted by gender and age.

First, the results in Table 7.7 indicate that, at a 99.9% confidence level, working in the formal sector of the economy was initially associated with better mental and 'general' health, compared to those working in the informal sector. However, once the effects of earnings, IJQ and WTQ were incorporated into the models, the positive relationship between formality and health became weaker. At the same time, it was corroborated that the level of earnings and IJQ remained significantly and positively associated with every aspect of workers' health, including the number of musculoskeletal problems, with which formality had no substantive association.[112] WTQ, instead, continued to show either a very weak or no significant association with the various health outcomes, as observed in previous sections.

[111] Refer to methodological Chapter 4 for details on the definition and operationalisation of each variable.

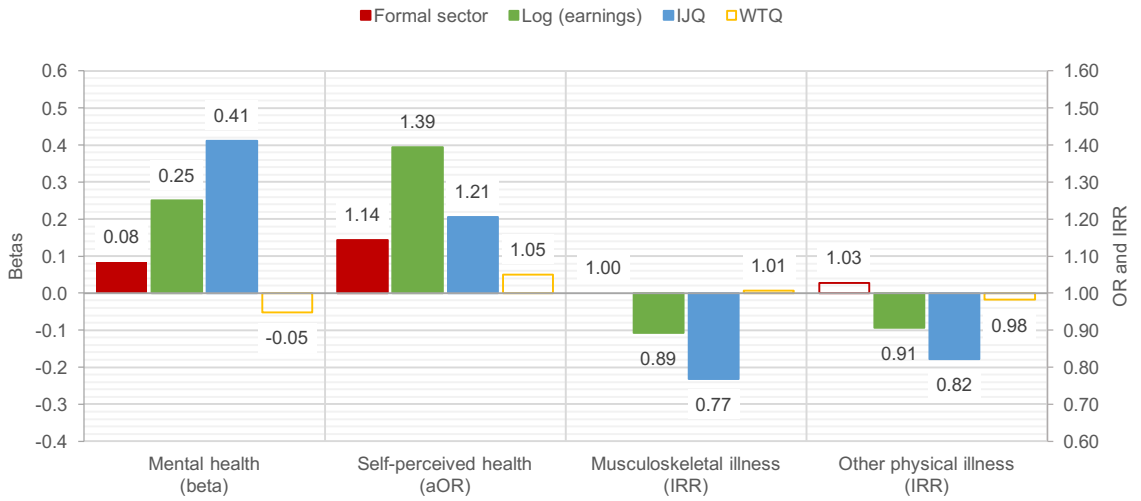
[112] Noteworthy, in Table 7.7 the number of physical symptoms remained, on average, higher in the formal sector than in the informal sector, even after controlling for other job conditions. All other things considered, we would expect that the number of physical problems was smaller in the formal sector, given the higher regulation and occupational safety inspections. Presumably, the weak but unusual effect observed is more likely to be explained by reverse causation. As an example, in many Latin American countries, where access to health systems is conditional to employment, people with pre-existing or chronic physical conditions may be more prone to look for work in the formal sector in order to secure access to the health care they require.

Table 7.7. ECCTS 2011: Associations between health and sector formality

	Mental health *(OLS)*		Self-perceived health *(Ordered Probit)*		Musculoskeletal illness *(Poisson)*		Other physical illness *(Poisson)*	
	1	2	1	2	1	2	1	2
Formal sector	.185***	.180***	.415***	.287***	.052*	.001	.067**	.057*
	(.049)	(.052)	(.045)	(.050)	(.021)	(.023)	(.021)	(.023)
Log (earnings)		.777***		1.030***		-.351***		-.305***
		(.082)		(.078)		(.034)		(.035)
IJQ		.033***		.015***		-.021***		-.016***
		(.002)		(.002)		(.001)		(.001)
WTQ		-.003*		.002*		0.000		-.001
		(.001)		(.001)		(0.000)		(0.000)
Constant	9.693***	5.628***			-.171***	2.092***	-.212***	1.626***
	(.047)	(.260)			(.022)	(.107)	(.023)	(.111)
N	8,393	7,635	8,803	7,997	8,407	7,644	8,407	7,644

Note: *p < .05; **p < .01; ***p < .001. The figures represent the unstandardized regression coefficients. Standard errors in parenthesis. Reference category: informal sector. Gender and age effects accounted for.
Source: author's elaboration from ECCTS 2011.

Figure 7.15. Standardized health effect of being in the formal sector, as compared to have a good job



Note: the figures represent the standardised regression coefficients betas (β) of being in the formal sector, as well as of earnings, IJQ and WTQ levels on mental health; and the exponential betas (e^{β}) on self-perceived health, musculoskeletal illness and other physical conditions. Empty bars represent no statistical significance at the 99.9% confidence level.
Source: author's elaboration based on Table 7.7.

To ease interpretation, these effects were standardised and converted into adjusted odds ratio (*aOR*) or incidence rate ratios (*IRR*), depending on the regression technique employed, and plotted in Figure 7.15. Therein, it's demonstrated that the positive impact of earnings, and IJQ was always larger than that of working in the formal sector (represented by the red bars), even if it is not possible to describe such difference in meaningful units. [113]

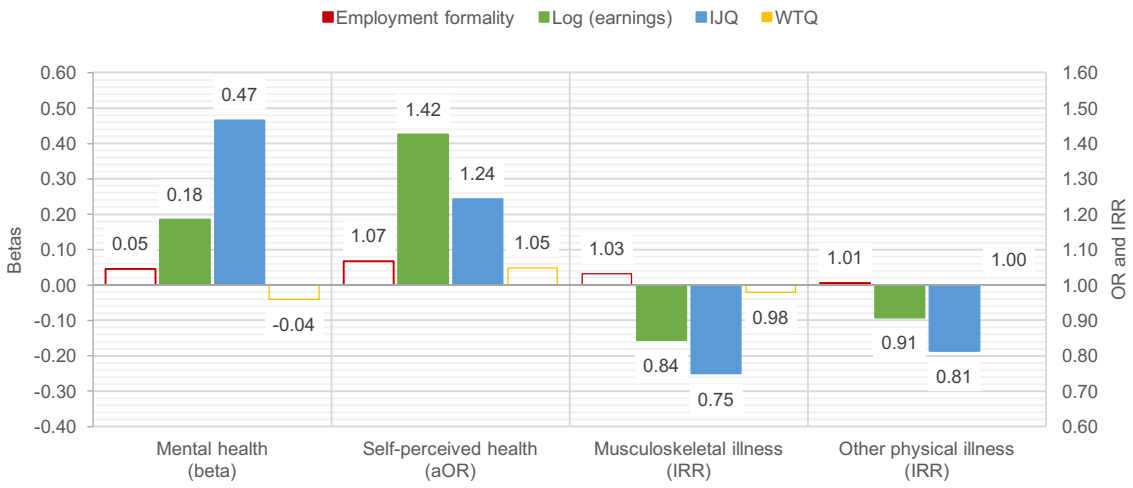
[113] Although standardising a dichotomous variable like sector formality loses interpretation meaning, it was decided to standardise all relevant predictors to compare their relative importance. If desired, the standardised coefficients should be interpreted in terms of standard deviations, e.g.: one standard deviation change in sector formality produces a 0.084 increase in mental health, whereas one standard deviation change in IJQ produces a 0.412 increase in mental health.

Table 7.8. ECCTS 2011: Associations between health and employment formality

	Mental health *(OLS)*		Self-perceived health *(Ordered Probit)*		Musculoskeletal illness *(Poisson)*		Other physical illness *(Poisson)*	
	1	2	1	2	1	2	1	2
Emp. Form.	.132***	.028	.162***	.040	-.051***	.019	-.040***	.003
	(.018)	(.021)	(.017)	(.021)	(.008)	(.010)	(.008)	(.010)
Log (earnings)		.570***		1.098***		-.525***		-.297***
		(.127)		(.128)		(.058)		(.059)
IJQ		.037***		.017***		-.023***		-.016***
		(.002)		(.002)		(.001)		(.001)
WTQ		-.002		.002		-.001		-0.000
		(.002)		(.002)		(.001)		(.001)
Constant	9.589***	6.114***			-.061*	2.620***	-.088**	1.597***
	(.060)	(.359)			(.030)	(.163)	(.030)	(.167)
N	4,722	4,334	4,624	4,252	4,725	4,335	4,725	4,335

Note: *p < .05; **p < .01; ***p < .001. The figures represent the unstandardized regression coefficients. Standard errors in parenthesis. Gender and age effects accounted for.
Source: author's elaboration from ECCTS 2011.

Figure 7.16. Standardized health effect of employment formality, as compared to have a good job



Note: the figures represent the standardised regression coefficients betas (β) of being formally employed, as well as of earnings, IJQ and WTQ levels on mental health; and the exponential betas (e^{β}) on self-perceived health, musculoskeletal illness and other physical conditions. Empty bars represent no statistical significance at the 99.9% confidence level.
Source: author's elaboration based on Table 7.8.

In more developed settings, the strong relationship between wages and health may be an artefact of the quality of health systems. To part with such effect, I added country of residence as an additional control variable, but the results remained robust: the relative contribution of formality and JQ predictors remained almost unchanged, even after accounting for country differences. The one difference observed is that the earnings item stopped being a relevant determinant of the number of musculoskeletal or physical conditions, although such association can be considered spurious.

Next, in the regression results displayed in Table 7.8 it seems that, as other studies have suggested (López-Ruiz et al., 2015), as more formal the employment relationship is, the better is the worker's health, in every aspect. Importantly, and supporting our argument, once the effects of monthly earnings,

IJQ and WTQ were accounted in a second step, the initial positive well-being effect of employment formality disappeared completely. Moreover, the earnings and IJQ yielded a positive and much larger contribution to every aspect of workers' health. The WTQ dimension, meanwhile, remained unrelated with workers' health as observed earlier.

Replicating the previous exercise, Figure 7.16 contains a graphic expression of the magnitude of the relationships between each health outcome and employment formality, earnings, IJQ and WTQ. They were expressed in terms of *betas*, *aOR* and *IRR* depending on the regression technique used. With the purpose of validating these results in face of cross-national differences, the country factor was added as control variable, along with gender and age. The results changed slightly in that employment formality showed a positive effect on self-reported and musculoskeletal health, although only at a 99% and 95% confidence level respectively. Yet, supporting the argument that has been presented in this study, the magnitude of such 'formal employment' effects was still substantively smaller than the effect of having an intrinsically good job.

7.5 Summary

To the end of improving workers' well-being, it is necessary to corroborate that what we identify as a good job from a human development approach effectively contributes to such outcome. The main objective of this chapter was to confirm, specifically, if Green and Mostafa's JQ indicators were externally valid in the same way they have proven to be for the aggregate context of Europe.

In section 7.1 it was demonstrated that the earnings and the IJQ indices were significantly and positively associated with Central American workers' well-being physical and mental health, supporting their validity. There were some exceptions nonetheless, particularly in the weak or null association found between the WTQ scale and workers' health, across all countries of the isthmus.

Given the unusual findings pertaining the validity of the WTQ index, section 7.2 was oriented to assess in detail the reasons why certain conditions that are generally conceived as a good organisation of working time did not yield any visible benefits on the health of Central American workers. Several alternative explanations surfaced.

One observation is that the well-being indicators collected in the Central American survey are not the ones that best capture the benefits of having a good quality of working time. The advantages of WTQ may be more strongly perceived in overall job satisfaction, subjective perception of work-life balance, civic participation or even in the well-being of workers' families. Furthermore, as other researchers point out, the WTQ index does not take into account the time spent in unpaid care and domestic work, which in the case of women can explain an important part of the variability in their quality of life (Eurofound,

2013, p. 49). It must not be ruled out either the possibility that the reliability of the WTQ index could have been compromised by using the ECCTS data, essentially because there were too few questions to create a stable and robust scale. Also because some relevant items, such as night and weekend work, were asked in a more ambiguous style than in the European version used by Green and Mostafa. If this measurement error is large, the correlation between WTQ and well-being is likely to be attenuated.

Another elucidation was that optimum well-being – at least regarding self-reported general health and physical conditions – occurs at moderate levels of WTQ. This explanation seems reasonable, for instance, in that having too few hours of work or too much flexibility to set working routines can be as detrimental for health as working very long hours and having no control at all to adapt ones' schedules. The lack of linearity in the relationship between WTQ and well-being is thought to reduce the strength of the association.

Additionally, the deconstruction of the WTQ index for the Central American sample, further evidenced that some of the averaged components behaved in opposite ways, thus cancelling each other's effect out. Ultimately, that would reduce the variability or range of the resulting WTQ scale, and affect the strength of the relationship with well-being.

Now, why would night or long hours work not be perceived as a disadvantage by Central American workers? An initial explanation is that the positive correlation between mental health and long working hours or during nights is artificially enhanced by the effect of other hidden variables. For instance, night jobs can have the advantage of a higher wage premium, working in safer industries, avoiding heavy traffic when commuting, or even a greater status associated with hard work. Only some of these factors could be controlled in our analyses, but many others remained unaccounted.

In that same line, there may be specific characteristics of the sample of night workers that are not considered, and yet are positively associated with well-being, providing an erroneous impression of the true relationship between health and night work. For instance, most night guard jobs require people that are physically fit to fulfil their tasks. Likewise, a person that suffers from chronic back pain is less likely to engage in a job that involves carrying heavyweights. In general, this compositional bias is known as the 'healthy worker effect', and it can overlap with other problems of the WTQ index as those commented above, lowering its impact even more.

Furthermore, in section 7.3 it was demonstrated that while the correlations between JQ and well-being in Central America were weaker to those reported by Green and Mostafa (Eurofound, 2012) for the aggregate of Europe, the Central American picture was very similar to that of the poorest countries in Europe. This result suggested that WTQ is indeed a valid indicator of JQ, only that the magnitude of

its impact on well-being appears to decrease along with the income-level of the region where is measured.

After all, from the perspective of the adaptive preferences theory, it is reasonable that in more economically deprived contexts working shorter hours, during traditional day shifts, and having room to make changes in the schedules is not translated into meaningful health benefits. On the contrary, the correlations between well-being and the salary level become comparatively stronger than the correlation between well-being and having a job with a good organisation of working time. IJQ aspects appeared to be of the highest relevance in both regions, confirming the robustness of that specific index. These results are in part consistent with other arguments which posit that the positive well-being effects of reduced working-time (or increased leisure time) will be better captured in high intensity or highly productive economies (Schor, 2001).

The previous idea leads us to another interpretation offered by the theory of 'adaptive preferences' discussed in Chapter 2. The creation of a WTQ index assumes that, along with a need for work, there is a universal human need for rest, for leisure, for having enough time for family and non-domestic activities (even Nussbaum suggested the right to play as one of the ten central capabilities). Therefore, we expect that working very long hours, during irregular or non-standard shifts, is harmful to the vast majority of people. Still, the theory of adaptive preferences postulates that in circumstances of high deprivation, some 'universal human needs' are simply excluded from the horizon of possibilities of the person, providing the erroneous impression that the satisfaction of those needs is not truly a determinant factor for their well-being. It is not rare, therefore, that among Central American workers the correlation between well-being and WTQ is more negligible than the correlation between well-being, and the satisfaction of primary needs such as income and physical security. Moreover, in conditions of low financial and cultural capital, the possibilities of making valuable use of non-working time also decrease, thus attenuating the correlation between WTQ and mental or self-reported health even more. On the whole, what matters most, is that all these alternative facts do not necessarily invalidate the selection of WTQ as constitutive feature of a good job.

Finally, as supporting evidence regarding the relevance of JQ measures, in section 7.4 we explored the hypothesis that labour formality could be more determinant of Central American workers' well-being than it is the intrinsic quality of jobs. Only to a limited extent, the results obtained were consistent with previous studies which state that in Central America some dimensions of informality are strong predictors of workers' subjective and mental health; especially the access to social security in the case of women (López-Ruiz et al., 2015). Although such association yielded significant in this study, the correlation between well-being and informality weakened considerably after considering other job characteristics in the models. The resulting evidence suggests that it is the intrinsic characteristics of work that affects most aspects of workers' well-being – particularly their mental health –, rather than

whether people have a contract, pension benefits or pay taxes. On the contrary, labour formality was positively related to self-reported measures of health only.

The results of the current chapter also open the discussion on whether there are other objective and measurable job characteristics that should be constitutive of a multidimensional JQ model yet are not being considered. Psychologists agree that apart from time structure, social support or personal contact, things like status, mutual goals or meaningfulness of work may also boost workers' mental well-being (Wood & Burchell, 2018). Some researchers have directly included measures of meaningfulness and self-fulfilment as part of their JQ indices (e.g. Muñoz de Bustillo et al., 2011), while others have opted to exclude them on the grounds of the subjectivity they entail. With the ECCTS data, specifically, it is not possible to statistically validate the contribution of factors like meaningfulness to the well-being of Central American workers because the survey did not gather the needed variables. Therefore, the debate is further addressed from a more qualitative approach in the following chapter, exclusively considering local experts' discourses about JQ in Central America.

8 The notion of 'good jobs' in the Central American public discourse

In the previous chapter, we gauged the external validity of a multidimensional and capability-based measure of JQ, by estimating the correlation between Green and Mostafa's indices and different well-being outcomes in the Central American context. The current chapter aims to complement the previous evidence with a qualitative exploration about the perspectives that local political authorities have around the concept of 'job quality' and its constitutive dimensions, to interpret the previous results in context.

As detailed in Chapter 4, the sample of interviewees was comprised of representatives from government, employers, trade unions, NGOs, and scholars from the six Central American countries (Panama, Costa Rica, Nicaragua, El Salvador, Honduras, and Guatemala). Interviewees were contacted following a snow-ball technique but ensuring that at least one sector representative was included by country. The majority of the conversations were held in the workplaces of participants, yet in a somewhat relaxed environment. These lasted from 25 minutes – the briefest – up to 2.5 hours – the longest. The fact that Spanish was the common native language to all participants and the interviewer (myself) was an advantage to more faithfully capture opinions. The translation of the selected fragments into English was not literal, but it tried to maintain all the nuances of expressions that were relevant for the analysis. Although there were nearly 50 participants in total, the fragments presented here to illustrate some of the arguments have been drawn from 20 participants, whose comments were considered representative of the broader sectors they belonged. The quotations were labelled by represented sector and country. Whenever comparisons are done, however, these were between the different sectors represented in the sample rather than country-based, because the latter sampling criterion did not reach data saturation.

Of note, the questions that elicit the responses and conversations here briefed did not necessary allude directly to the interviewees' theories about what a good job should look like. Nor were interviewees given a pre-set list of job dimensions to discuss upon. Instead, in most cases, participants were asked to overtly comment on the concrete activities and practices they undertake to improve the quality of jobs

in their local action field. In this manner, interviewees could name and identify the aspects of work they more strongly deem associated with the idea of 'job quality'. Furthermore, since the interviews cover only a group of public actors and are not necessarily representative of all Central American workers, the responses here collated are not taken as mandates of what should be included in a measure of JQ. Put differently, rather than a complementary validation, the interviews serve the purpose of providing some context to interpret the results obtained in the previous chapters and to shed light on the obstacles or leverages to implement a JQ policy as proposed by Eurofound and already validated in the previous chapters.

The chapter is structured as follows: first, I comment on those aspects that respondents more often associated with the notion of a 'good job' and that are covered in Green and Mostafa's framework. Second, I briefly outline additional factors that were systematically mentioned by interviewees concerning job quality, but which are not incorporated into our framework because of the principles that define it and that have been discussed in Chapter 2. In this regard, particular attention is given to the notion of labour formality. Third, I address those factors that interviewees did not often mention as their focus of policy or research, but that we consider constitutive aspects of JQ, elucidating why a comprehensive JQ framework has not permeated the local political discourse so firmly.

8.1 Surviving, not thriving: the universal basics of a 'good job'

Green and Mostafa's JQ framework identifies seven essential aspects that are believed to be universally important for workers' well-being: earnings that ensure survival, prospects, working time that is conducive to work-life balance, a good physical environment, a good social environment, skills and autonomy, and an appropriate level of work intensity. Three of these features were the most mentioned during the interviews with Central American experts, as part of what they consider a 'good job', specifically: a job that has an adequate salary, a job that is stable, and performed in a physically safe environment.

A job with a good level of earnings

Without surprise, adequate and stable payment was a job characteristic mentioned by nearly all informants across the six Central American countries and all sectors. Although this relates to a much narrower perspective of development than the one proposed by the Human Development approach, the income aspect was considered so relevant that, in occasions, the entire notion of job quality, as the actions aimed at improving it, were reduced to this single aspect, as revealed in phrases such as: "many issues beyond pay simply are not on the page when thinking about quality of jobs" (Trade Union, SLV). Efforts to ensure an adequate level of wages, were particularly attributed to trade unions in reaction to the lack of fair state policies, being that it is believed an essential unmet need:

> "The demands of the trade union movement have been mainly on wage issues; given that there is unemployment, and basic needs are not met, people are willing to accept very poor working conditions and low wages..." (Trade Union, GTM)

> "Here, practically, trade unions are constituted only for economic demands (...) It is mainly what they focus on, because the state itself does not generate a comprehensive wage policy that covers all public workers equally." (Scholar, GTM)

In practice, what was considered a 'good' salary was directly associated to the minimum level of income that would ensure a decent standard of living. Ultimately, that level is summarised in the statutory minimum wage which in most governments is periodically determined taking into consideration the price of a basic food basket. Therefore, the greatest part of workers' demands revolved around improving the level of national minimum wage, despite the evidence about its weak association with the average level of monthly earnings at the country level. For example, a representative from a Panamanian trade union said in this regard:

> "The minimum wage is also being set as a major issue for the upcoming negotiations. (...) We felt deceived by the minimum wage issue, because we may have relatively high wages in the region, but our purchasing power is much lower. Thus, the fact that we have the highest wages sells out very well, and it is actually believed by people." (Trade Union, PAN)

Enforcement of the minimum wage law also appeared as an area of concern among employers, who claimed that Ministries of Labour have insisted that "compliance with minimum wage is the main thing." (Employers, CRI). In fact, it has been an important programmatic area of LISs throughout the region:

> "One trending issue that we have is the discussion of the minimum wage. It´s one of the main agenda items of the Minister of Labour. The discussion takes place in a tripartite body called the National Minimum Wage Council, which must review this standard and fix it every 3 years." (Government, SLV)

Only a few participants – mainly scholars and NGO's representatives – talked about non-pecuniary benefits of the reward package as being defining of job quality, in contexts where salaries are generally low. However, respondents barely talked about 'fairness' of wages in the sense described by Green and Mostafa, that is, in terms of "being paid according to one's skill and effort" and level of "risk-taking" (Eurofound 2012: 65).

A stable job

Specially representing the academic and union sectors, interviewees recurrently talked and showed concerned about increasing number of cases of job discontinuity. Hand in hand, it appeared the discourse about the deterioration of traditional employment relationships, alluding to phenomena like 'outsourcing', 'subcontracting', 'massive lay-offs', 'temporary hiring' and 'job instability' as characteristics of bad quality jobs. Moreover, echoing the literature in job insecurity, it was evident that the notion of job security handled by union delegates and pro-worker NGOs did not only cover employment continuity (quantitative job security), but also the continuity of other valued jobs features (qualitative job security). The following excerpts are demonstratives of this perspective. The first corresponds to a respondent denouncing a wide spread practice in the *maquila* sector; the second describes the perception of a union representative regarding the growing use of temporary work agencies by transnational corporations:

> "The other thing is the recognition of continuity: they [employers] usually end labour contracts on December 31st each year to rehire the same person on January 1st, thus the worker loses vacation benefits, compensation, etc." (NGO, SLV)

> "…all this happens in private companies. These are tricks that transnational corporations bring to pay less. (...) In practice, transnational corporations make differences: if the permanent is given a uniform, the temporary is not; if the permanent is given food, the temporary is not. They see them as second-class workers even though they do the same as permanent workers!" (Trade Union, NIC)

As illustrated below, unions across Central America have been acting to oppose increasing outsourcing, sub-contracting, and contract flexibility that are thought to deteriorate workers' job security but also the very capacity of unions. As with the level of earnings, their continuous action to achieve greater job security implies that they consider it a fundamental aspect of good quality work.

> "We also support unions in issues such as outsourcing, so that at least they keep the conditions of their previous collective agreement, if there is no way to avoid outsourcing. Because most unions have little bargaining power on these issues. They are terminated and paid their benefits, and then subcontracted. And that breaks job stability too. It totally weakens you as a union." (Trade Union, PAN)

Job security in the public sector was a contentious topic in almost every country. Particularly in Panama, were the public sector is highly politicised, informants persistently discussed the level of job insecurity faced by civil servants after every change of government administration. In Latin America, public jobs have been traditionally associated to better working conditions in terms of economic rewards, autonomy, physical environment, and working time; conditions that workers in the private sector even

considered "unfair royalties" or "privileges". Therefore, the apparent drop in public employment rates was often described as "worsening of job quality", among many union representatives. Two academics from Guatemala and El Salvador described part of this "threat" against the stability characteristic of public jobs:

> "In the state sector there is a lot of political pressure and employees feel *insecure* in the face of changes in government administration. Organisational culture is deteriorating, employees are not talking to each other, there is no long-term vision, and there is a climate and work environment unfavourable to advance on these issues." (Scholar, GTM)

> "Recently in Honduras there has been an escalation of the figure of contract suspension and cancellation of workers, essentially in the state sector. The law allows the suspension of contracts for determined causes. The purpose of the suspension is that, for a certain time, the worker who has not worked is not paid their salary, but will return to his position later. They say it is a protection to the job stability, that is, in order not to cancel it, it is preferable to *suspend* it than to leave it all the time without salary. This has been taken in Honduras as a measure to be able to terminate workers. Unfortunately, it is the state sector who has been implementing these measures; we have seen how they have abused of the regulation as such." (Scholar, HND)

As the section's title suggests, the notion of job quality that most local authorities exposed emphasises on the satisfaction of basic needs, together with those aspects related to survival, rather than to the idea of 'flourishing' supported in the capability approach. Another example of this is the fact that, when discussing 'job prospects' as a whole, interviewees focused more on the fear of job loss (i.e. the job insecurity component) than on whether the job offers 'prospects for career advancement'.

A job performed in a physically safe environment

After asking experts in which areas they have focused their efforts to improve the quality of jobs in their countries, or in which areas of job quality they have already seen the greatest achievements, a large part of the interviewees referred to matters of occupational health and safety, suggesting that in Central America working in a safe physical environment is also considered a fundamental aspect of a good job.

According to a specialist, in all the countries of the region, "the theme of industrial safety has permeated greatly because of ISO[114] regulations that expanded in the 1990s" (Scholar, GTM). Clearly, the physical quality of workplaces is a topic that entered impetuously in the agendas of Central American governments, which seem to have made significant progress in updating their legislations based on the

[114] ISO is the English acronym for International Organization for Standardization.

empirical evidence gathered by occupational health specialists. For instance, even El Salvador (which had very little regulation by the time when the ECCTS was conducted) had issued in 2012 a top-notch law on occupational risks prevention and enforcement regulation. As informed by a government official:

> "This [new law] has allowed employers to reduce a little their level of non-compliance and it has made possible to adopt a preventive approach around occupational risks. We can undertake inspection visits to do a complete study on safety or occupational hygiene: we can check on heat levels, noise, thermal stress, etc. There are also technical educators for the training of occupational safety committees within each workplace." (Government, SLV)

In Costa Rica, for instance, employers also confirmed that the aspect of occupational safety "has become very important these last two years" (Employers, CRI). Probably because the topic is under constant international scrutiny, employers' organisations have been actively adopting these physical safety standards, with support of local states, international NGOs and the very transnational corporations they work at. Some of the own actions employers praised, was the establishment of "occupational health commissions" in their companies, the dissemination of "self-assessment guides", and the implementation of preventive health programmes targeted to outdoor workers. According to the reports of an NGO delegate which had action programmes all around the isthmus, international firms have invested substantive amounts of money to disseminate good preventive practices in occupational health and to implement certification programmes for "safe companies". In summary, one expert in Guatemala would say:

> "All industries are in tune with reducing occupational accidents, they all handle the record of exposed days without accidents, there is every kind of incentives to reduce the accidents rate, etc. (…) In sugar mills, for instance, they take care of the hydration, the nutrition, they even have nutritionists designing their weekly menus, it is surprising! These workers even eat fish once a week, like no one else in Guatemala. Employers take care to avoid contagions of diseases like Zika and others, with mosquito nets, fumigation, repellent lotions, etc., and everything is provided by the company." (Scholar, GTM)

It comes as no surprise that all the interventions and comments made by the interviewees regarding the quality of the physical environment, focused on the cases of outdoor activities done in primary industries – mainly agriculture – and of secondary industries as well – such as apparel manufacturing and construction. These industries still represent a significant proportion of the employment structure in Central America, especially in rural areas; and often comprise the most dangerous and least inspected jobs:

> "The situation of risks is compromised for workers, especially in the areas where it is least inspected, for example, in agriculture, where herbicides are applied and all sorts of things that no one knows if are done under the required safety standards" (Scholar, GTM)

Frequent sun exposure, dehydration, handling of toxic substances, contagion of tropical diseases, and high noise level were frequently mentioned as characteristics of poor jobs in sugar and coffee plantations, or in construction sites. Experts also mentioned the "respiratory diseases caused by the particles released from cotton and fabrics" as common issues in *maquila* factories (NGO, SLV). There was also high awareness among all sectors about how "chronic kidney disease" has become an issue of public health in some Central American countries, associated to poor physical working conditions of agricultural workers (specifically, extremely hot weather which causes dehydration and mineral deficiency). Of interest, even the lack of extremely basic hygienic conditions in the workplace were associated to poor job quality, such as access to clean water and toilettes, which can be problematic in rural areas, also in export processing zones. As it could be expected from more deprived contexts, the discourse and practice on JQ in these countries was closely related to the satisfaction of primary needs, and it hardly went beyond that perspective, as manifested in the comment "undoubtedly, there is a strong differential of urgency, to ensure physical security above all, it is about survival versus the social environment" (NGO, GTM).

8.2 Other policy priorities competing with Job Quality

When asked about what actions or programmes they have deployed to enhance the quality of jobs, from their own scope of practice, interviewees systematically mentioned some additional work-related themes which do not have a place in Eurofound's JQ framework. Together with the aspects identified in section 8.1, other policy priorities have been placed, for instance, in issues such as job creation, productivity, protection to the right of association, strengthening of workplace inspection, eradication of child labour and labour formalisation. The following excerpt briefly exemplifies the way in which some of these issues competed with the priority given to JQ:

> "Given the context of high underemployment, access to income is the first need to be met, then the quality of that income and ultimately the quality of life. We do not neglect decent work but the plan is to create jobs." (Government, HND)

All the topics aforementioned came up often in the interviews suggesting that they were given a special place in the hierarchy of work-related policies. Undoubtedly, they reflect important and extended problematics in Central American countries, and they are probably the kind of issues that authorities feel they can target more effectively from a political perspective. However, from Green and Mostafa's perspective, these aspects should be treated separately from the notion of 'job quality' because they do not refer to characteristics of the job itself. For instance, we have already argued in Chapter 2, that child labour is an aspect ascribed to the person who holds the job. Union representation and workplace inspection do not refer to the quality of jobs either, but to mechanisms for the improvement of JQ. Moreover, in Chapter 6 it has been demonstrated that indicators of job quantity and economic growth

are not directly related to how good are the intrinsic aspects of jobs. Thus, rather than challenging Green and Mostafa's model, the vast attention that interviewees place on these aspects illustrates the obstacles faced by local actors to progress from more traditional and narrower policy frameworks, towards the implementation of a holistic job quality model.

Furthermore, it was noticed that informants across countries and sectors displayed a marked *legalistic* notion of JQ. Put differently, a 'good job' was generally described as one that complies with basic labour rights, as determined by what is written in the national legislations and international conventions. For instance, when asked about how he would assess the quality of jobs in his country, a labour advocate and scholar from Costa Rica replied by evidencing that there was a strong failure to comply with essential individual and collective labour rights such as: the right to work, job stability, minimum wage, freedom of association, right to strike, collective bargaining, social security, and protection of working minors and women. The existing regulation was not necessarily considered the highest achievable standard of working conditions, but possessed the minimum required to classify a job as one of good quality. This strong legalistic stance is probably the reason why workplace inspection is considered relevant as a mechanism of JQ improvement, since it "is the Labour Inspectorate the one in charge to see that labour laws are being met" (Employers, CRI). Governments' marked concern about child labour also obeys to the recently signed ILO Conventions 138 and 182[115], and to the pressure of the United states in the context of the CAFTA-DR.

Labour formalisation

As a competing policy priority, labour formalisation was one of the most recurrent topics during the interviews. Across countries, without exception, interviewees from all sectors persistently associated bad quality jobs with informal work. The latter was predominantly defined as jobs without access to social security, but it was also used to identify forms of subcontracting, working in "unregistered" small companies, unpaid family members, self-employment, and absence of a registered labour contract. In words of one of the participants, the 'polysemy' involved in the notion of 'informal work' is precisely one of the problems of using formality measures as indicators of how good jobs are. This disadvantage was already discussed in previous chapters, and confirmed during the interviews with Central American experts in the matter. Although there was great awareness about the rocketing rates of informality in their countries, some representatives from the government, workers, and employers' sectors appeared puzzled or insecure about how these informality rates were calculated. Certainly, scholars and ILO experts seemed clearer about the many faces and evolving meanings of informality:

- [115] ILO Convention No. 138 (1973) sets the minimum age for admission to employment and work. Convention No. 182 (1999) pertains the elimination of the worst forms of child labour.

> "At present, a legalistic interpretation of informality has been imposed on the state. Before it was rather conceived as surplus labour. Now it is understood as a problem of the people and the work generated in the business world. Therefore, implementing a job quality model in politics requires changing the formal/informal legal divide to that of precarisation." (FLACSO, CRI)

> "But such informality also needs to be classified: there is the agricultural worker, the street vendor, the self-employed, and the outsourced worker that went from being a salaried worker to someone that now sells the clothes he sewed at home, using his energy." (Scholar, CRI)

> "The reality of the labour market has evolved and so have the methodologies to measure informality. The priority has been to adopt the provisions of the ICLS, which are already quite comprehensive. We recommend tailoring country questionnaires as much as possible. Sometimes, due to national circumstances, this is not possible, but the ILO assists with the harmonisation. There are somewhat standard questionnaires proposed by the ILO to measure informality, although it is very difficult for countries to implement them systematically. (...) Thus, proxies are often used, such as occupational category and establishment size. Sometimes, the type of workplace is used to identify the informal sector as well." (ILO, PAN)

In line with the legalistic perspective described earlier, the correlation between informality and bad quality jobs is built upon the idea that outside of formal arrangements, no labour law can be properly enforced, thus "compliance with basic rules, such as 8-hour workday and bonuses, is more complicated within informality" (Employers, CRI). For example, a member of a Salvadorian NGO reported:

> "Here it happens that embroidery women work from their own homes while companies assign them specific tasks on a weekly basis. (…) Embroiderers are not included in the payroll and have no right to social security, or anything else; only to payment for the embroidery service. It is a form of subcontracting and they are not recognised as *maquila* workers, therefore, they are not subject to regulation of minimum wage, maximum day extension, coverage by disease or by exhaustion derived from work." (NGO, SLV)

Since traditional institutions for the improvement of working conditions, such as labour inspection and collective bargaining are not expected to penetrate the informal realm, many policy makers have been devoted to "formalise informality", rather than improving working conditions universally. Unquestionably, the ILO has been the greatest precursor of the formalisation project in Central America, furthermore it has publicised in such a successful manner that practically all interviewees mentioned the ILO Recommendation No. 204 (2015) concerning the transition from the formal to the informal economy. Specifically, participants informed that by signing the ILO Recommendation No. 204, all governments in the region have pledged to undertake concrete actions to formalise all sorts of informal workers, helping employers in that endeavour.

A few participants representing the academic sector and NGOs were more judgemental about governments promoting formalisation under the 'decent work' slogan because, as illustrated in the following quote, they believed that the underlying motivation was not improving the quality of jobs and workers' well-being, but to expand the tax structure, both reasonable goals although certainly different:

> "The type of formalisation that has been promoted is based on taxation. Ultimately, what is sought, is that the state can receive taxes from these people, regardless of whether they are registered in the social security system or if their working conditions are optimal. (...) There have been several studies of local organisations on this issue, and all point to taxation, to how people become taxpayers, but they do not think about labour relations, workers' health, etc. They are simply aiming at the state's capacity to raise more money." (Government/Scholar, GTM)

Furthermore, when asked to discuss the correlation between job quality and formality indicators, scholars of different countries showed more awareness of the fact that: in some contexts, having formal access to social security is not as beneficial for workers' well-being as directly satisfying their need for an income. This was said to be often the case of low-income countries in which social security institutions and services are characteristically weak, with coverage mostly restricted to urban areas:

> "In countries such as Nicaragua, Guatemala, social security services still have very low coverage, far from the universal base, so it is very difficult to say that access to social security in these countries is decisive for workers' welfare. Although they have access, the quality of services is very poor. In Nicaragua, for example, very few women have access to prenatal medical check-ups or preventive medical checks for workers. In these countries, work payment or pocket money may be more important because in the end they go directly to buy their drugs in the pharmacy. In Costa Rica, instead, access to social insurance is more decisive because it is better in terms of institutional structure and quality of services. (...) Here, in Costa Rica, job quality can be linked more closely to the quality of institutions and formality." (Scholar, CRI)

Other respondents acknowledged the problems of using informality indicators for policy purposes given that the concept is often used with a double-standard. On the one hand, some people praise self-employment as a form of "entrepreneurship" and autonomy that can conceal "very bad quality and unstable jobs", with "very insecure incomes"; despite the "promising idea that is sold" (Trade Union, PAN). On the other, some categories of informality "admit a more victimising approach" as survival strategies (Scholar, NIC).

Despite all these ambiguities, when asked whether social security should be considered a minimum requirement to define a job as 'good', an expert from ILO in Costa Rica bluntly answered: "Yes, protection against maternity, sickness and industrial accidents remain important and will always be" (ILO, CRI). Another respondent expressed the value place by the ILO in capturing informality data:

> "Under the ILO premises, there is no decent work without social security. Informality means that the concept of decent work dies, that is, work with respect, with rights, that complies with the seven ILO Conventions." (Trade Union, CRI)

8.3 The forgotten or unpopular dimensions of Job Quality

Part of the assumptions underlying Green and Mostafa's set of JQ indices is that, just as there is a human need for stable income and physically safe work, there is a certain human need for leisure, resting time, for working in a space free from abuse and violence, free form the stress produced by high work intensity, and low decision power. Moreover, some literature on well-being suggests that there is also a basic human need of caring for others and experiencing that our job is meaningful.

Notwithstanding, many of the dimensions that we consider essential to JQ did not emerge systematically during the interviews. Considering that our interviews targeted actors that are actively involved in policymaking and in the crafting of public discourses, these omissions were within expectations because they are aspects that have not attracted much political interest in Latin America. The quality of working time, social environment, work intensity and autonomy appeared to be somewhat 'forgotten' not because they were considered unimportant but because authorities do not see it as their role to improve them. Therefore, these omissions should not be taken at face value as indicators of different work valuations or an alternative model of JQ, but as uncovering deep-seated discourses.

Quality of working time

Everything related to the quality of working time was not mentioned very often as a relevant job aspect for well-being, which echoes the weak statistical relationship found in the previous chapter between well-being indicators and the WTQ index. When the subjects were specifically asked whether the different sectors addressed such dimension of JQ in their programmatic agendas, or how important they consider it was for workers, the responses were somewhat succinct, of the type: "unions do not think much about the balance between work and family" (Scholar, GTM). After narrowing the question to the specific components of the WTQ dimension – working hours, schedules, short-term flexibility and control over working time – participants started reporting about generally bad but *normalised* signs of low quality jobs, and about the trade-offs that commonly occur between WTQ and other job aspects.

For instance, several reasons emerged to explain why shorter working hours is not necessarily translated into an advantage for workers' well-being. The most understandable one is that workers would perceive lower monthly salaries if they demanded a reduction in the number of weekly hours (an explanation already considered in Chapter 7):

> "An area where not much has been done is in reducing working hours. Because workers are paid little, they are concerned that reducing hours would reduce their wages; it would not be about reducing hours for the same salary." (Trade Union, PAN)

Additionally, experts on labour legislation said that in most countries workers are not entitled to receive a proportional minimum wage for the hours worked, unless they work full-time. Moreover, working overtime to meet the goals is a widespread practice in the industry sector. The problem with such practice is that extra hours often remained unpaid because "they are not covered as overtime" (Government, SLV), or that "workers are not going to report overtime to inspectors" (Employers, CRI).

Consistent with the hypothesis discussed in the previous chapter, working during non-standard night and weekend shifts was not repeatedly perceived as a disadvantage for workers' well-being, because – so it is believed – that condition is compensated with higher monetary rewards:

> "For example, call-centres, which have developed strongly in Guatemala during the last 5 years, they have nightly schedules, but workers are very well paid in relation to the qualification level that is required. Some have only finished high school and can earn almost a thousand dollars. In a bank, on a more regular schedule, they would earn half of that." (Scholar, GTM)

Only one respondent suggested that, as it currently stands, the Panamanian legislation protects workers' conventional diurnal shifts, and business-day schedules due to the fact that this is determinant for their health, despite being in direct conflict with the interests of the burgeoning business sector:

> "One of the most conflicting issues for us is Sunday work and that the day off can't be any other day of the week. In other words, it is the issue of the many services that run 24 hours a day and 365 days a year: harbours, the Panama Canal, the mines. And it has the problem that for workers the day off *must* be Sunday. (...) There is the same issue with night shifts, because the current labour law is designed for a diurnal work." (Employers, PAN)

Employers also advocated for an increased flexibility to arrange working schedules in a way that adjusts their productivity demands. A Guatemalan scholar, expert in work-life balance studies, said that any sort of worker-led flexibility to organise their working time is a commonly ignored aspect of JQ, particularly from the perspective of employers in the industry and manufacturing sectors:

> "Those who run the factories have had a very mechanistic training; they are engineers trained to make processes work. Their only objective is that machines work 24 hours a day, with 3 shifts and nothing else. Issues such as flexibility and quality of life are not taught at the undergraduate level in universities, so they do not have it incorporated as an important variable. Then, you cannot remove a person from your workplace during

> the day, and if there is illness or school needs of the children, workers are fired for asking for too much permission." (Scholar, GTM)

Employers showed themselves aware that trade unions would impose resistance, because the kind of flexibility they demand is not in pursuit of greater work-life balance for their employees. In Costa Rica, for instance, there was a recent appeal from employers to modify the law to allow a "flexible working day 4x3", but workers rejected the promotion "as it does not ensure vital minimum wages" (Tarde Union, CRI). In this context, a representative from the highest business organisation in Costa Rica implied that, although is not their main motive, some specific groups of workers (e.g. students and care givers), can benefit from such flexibility as a by-product:

> "The first problem is that we cannot talk about flexibility because the union side already rejects it, because they assimilate it to violations of labour rights. When we presented the issue, the unions themselves told us that they understand that everything is changing and that there are new realities in Costa Rica, but they still opposed by principles. Companies do it because they have no chance, while it also fits workers' needs. Moreover, as it has not been possible to hold this discussion at a national level, employers do it outside the law. But these practices, such as teleworking and the 4x3 rotating shift, occur as a matter of necessity. In the end, the majority of workers who have such shift structure are satisfied and would support such law. For a company that is service oriented, and where we are seeing millennials prioritising to have time for other activities, that is a reality. The Ministry of Labour itself is trying to make an agenda today and is calling to talk about issues of flexibility, because companies are pushing." (Employers, CRI)

Undoubtedly, not every government in the isthmus aligns with the demands of the business sector. A few representatives from the national labour ministries seemed reluctant to give such concessions to employers because, at least in their discourse, they do consider employee-led flexibility as a relevant aspect of JQ. Apparently, Costa Rica and El Salvador have a strict legislation in this regard:

> "In El Salvador, that is a non-negotiable subject, flexibility is not allowed: schedules are 8 hours continuous with a lunch break. Flexibility spaces have not been approved because this gives way to abuses from employers. There was a proposal about five years ago, in the textile sector, but it was bluntly rejected." (Government, SLV)

The conflicting stances between governments, employers and unions regarding WTQ, partly explain the unwillingness of interviewees to touch upon these aspects of JQ. Thus, it is not necessarily that working-time control is an 'ignored' or 'unvalued' dimension of JQ, but a very contentious one. And although few union representatives also manifested some awareness about how important is this job aspect in itself, they believed that having low discretion is becoming the 'new normal', therefore they do not give it the highest priority in their negotiations.

> "If there is one thing that employers are jealous about, it is working time, because that is where the control of work is. Copa Airlines negotiated with the union to 'buy' their day off, paying them an over salary. But I know that such day costs a lot and it is never going to translate into how much they are paying! It is very difficult to find a company in which you can intervene or dispute in the control of working time. They simply do not give you that concession. It is them who control working time. And in this country, there is very little experience in these matters as to intervene." (Trade Union 2, PAN)

A more indirect confirmation of how important work-life balance can be in Central American societies, is that interviewees from all sectors systematically mentioned maternity leave and workplace breastfeeding as essential human needs that demanded particular surveillance. Indeed, the literature has demonstrated that workplace breastfeeding support (e.g. through adequate time breaks and rooms) enhances job satisfaction and workers' perception of work-life balance (e.g. Jantzer, Anderson, & Kuehl, 2017). Protection policies of the kind have trespassed the domestic realm and began to be concern of the state. Likewise, some unions in Panama and El Salvador mentioned to have undergone targeted action aimed at raising women's awareness of these rights. And yet, most of the policies implemented so far seem oriented to support women's work-life only.

Good social environment

The capacity to work in a supportive social environment, free from violence and abuse, rarely came up during the conversations about essential characteristics of a good job. The few rapports that did touch upon this issue came from academic and NGO representatives. Overall, they indicated that despite being "a common practice", workplace harassment "is a recent figure" and its harm on well-being "is little known" (Scholar, HND). Moreover, there is reason to believe that underreporting cases of abuse contributes to the invisibility of the problem. In words of an interviewee, workers often trade-off their physical and mental integrity for job security:

> "Due to the lack of employment this dynamic is allowed because the worker is afraid of losing his job." (Scholar, HND)

A couple of representatives from the academia and non-governmental sector described how the incidence of abuse at work started to be more evident in sectors such as textile manufacturing, sugar and coffee plantations:

> "[In the *maquila*] verbal and psychological work harassment by line supervisors is common. They put pressure on workers, so that they do not delay the production line. This also damages relationships within the work team because supervisors do not contribute to adequately resolve conflicts between people in the same team, and the situation gets tense." (NGO, SLV)

> "In the sugar sector the issue of sexual harassment is very restricted and does not give room to it, but not so much in the coffee sector. Therein, workers are less protected and subjected to harassment as a condition for the reception of the product, for example." (Scholar, GTM)

ILO experts acknowledged that there is a lack of legal provisions aimed at improving the quality of the social environment in general. LISs are not adequately trained to evaluate this type of working conditions, and that "the issue of psychosocial risks is still very distant to public policy" (ILO, CRI). However, the different sectors are gradually showing more concern, and implementing concrete practices to tackle it. In Guatemala, for instance, a scholar said that the government provides training to coffee workers for the prevention of sexual harassment and rape committed by co-workers or supervisors. In Panama, some trade unions are introducing specific gender clauses in their collective agreements, "to protect women who work in more masculinised sectors of activity". Meanwhile, employers in Costa Rica elaborate "compliance guides so that companies can self-evaluate in labour matters such as harassment".

Adequate work intensity

In the interviews held with the government, workers and employers' sectors, the amount of physical and mental effort displayed at work was also barely identified as a crucial job quality dimension. If at all, they said that workers were "habituated to the intensity" of some activities, especially in apparel factories (Government, HND). On the contrary, academics and NGO experts expressed more awareness about the pervasive physical, and mental effects of highly intense jobs. The following quote was illustrative of the effects that high pressure can have on call-centre workers:

> "…There are very complicated productive areas such as call centres, with a dynamic in which boys even use drugs every now and then to meet their goals, and with very high wages that are not reported to social security… then you generate a logic of work climate that makes you think about it." (Scholar, CRI)

More often, the problem of work intensity and work pressures was overlapped with that of working long hours and unreported overtime, which partly explains why these issues were as unpopular as those concerning WTQ. For instance, in the context of apparel factories (*maquilas*), a participant informed:

> "The biggest responsibility is from the one who manufactures. If she delays in her task, all the others are affected. Then there is a lot of extra hours and, worse still, there are ways not to report those hours. (...) Because by law the worker is not required to work overtime, but they have goals to meet and often need extra time to cover those goals..." (NGO, SLV)

Skills, autonomy and meaningfulness of work

Most interviewees did not explicitly conceive a good job as one that "fulfils a need for doing good work" – in words of Green and Mostafa (Eurofound, 2012, p. 14). Above that, is the widespread belief that the best job will be one that "fulfils the market need", since only under those circumstances workers can secure their employment as well as income stability. When asked whether they considered that autonomy and skills enhancement were constitutive dimensions of JQ, governments and employers expressed more concern about the lack of trained labour force to match the demands of a rapidly changing and up-skilling market:

> "…We have had a change in our economy in the way that, for example, the area of technology has expanded a great deal and there is no skilled workforce. In other services such as call-centres you need young people who speak English, but there are none. Then, these young people are lagging behind in job quality." (Government, CRI)

> "It was found that skilled labour was required for certain jobs. Therefore, the Ministry agreed with the employers to take care of the training prior to entering employment, so as not to miss the placement opportunity. The commitment of employers was to hire at least 80-90% of these people." (Government, SLV)

In this sense, the main motivation to build skills is not directly to enhance workers' autonomy in the workplace but to boost employability of young and female workers, "people who otherwise the market automatically discards due to lack of experience" (Government, SLV). The challenge has typically been assumed by governments in conjunction with the National Professional Institutes (NPI)[116], with collaboration of unions and employers' organisations. For instance, a strategy that has gained popularity in the isthmus is 'dual vocational training': programmes jointly developed by the government together with employers by which prospect workers attend classes at a vocational organisation and receive on-the-job training at the company.

Part of the literature on JQ suggests that individuals also have an intrinsic need for self-fulfilment and meaningfulness from work. From an early stage, the sociological literature used the concept of alienation to exalt the non-instrumental notion of work. Green and Mostafa included indicators of skills and discretion in their JQ scheme in order to cover the more objective Bravermanian approach to alienation.

[116] National Institute of Learning (INA) in Costa Rica, Salvadoran Institute of Vocational Training (INSAFORP), Technical Institute of Training and Productivity (INTECAP) in Guatemala, The National Institute of Vocational Training (INAFOP) in Honduras, the National Technological Institute (INATEC) in Nicaragua and the National Institute of Training for Human Development (INADEH) in Panama.

However, as Muñoz de Bustillo et al. (2011) point out, there are other more subjective sociological approaches to alienation that focus on self-reported measures of meaninglessness, powerlessness, and self-estrangement towards the work produced. In fact, during recent decades, pessimist accounts about the changing nature of work as "producer of meaning, self or collective identity", have flourished in the sociological field (on this idea see Strangleman, 2007, 2012). Even economists have paid attention to the positive effects that feelings of social recognition as well as meaningfulness have on performance and productivity, considering it a motivator of low cost for employees compared to economic rewards (Kosfeld, Neckermann, & Yang, 2016).

Muñoz de Bustillo and colleagues (2011) assure that the impact that measures of powerlessness, meaninglessness, social isolation and self-estrangement have on workers' psychological well-being, has been 'relatively' well tested in a variety of countries and work environments. Regardless, Green and Mostafa decided not to include these variables in their model because they describe workers' subjective feelings and reactions "rather than a feature of the job itself" (Eurofound 2012).

Since the 2011 ECCTS did not include subjective measures of meaningfulness or fulfilment from work, it was not possible to test if these are truly determinant for the well-being of Central American workers. In addition, from the interviews, it can be gathered that neither the objective, nor the more subjective approach to self-fulfilment are constructs that have permeated the public discourse about JQ. As we have sustained earlier, such omission does not mean that feelings of meaningfulness and self-fulfilment are not important contributors to the workers' psychological health, but it does not provide any further evidence to support the inclusion of these subjective concepts in the model of JQ either. In this study, the exclusion of such items is supported not only because of the subjectivity they entail (which would make international comparisons less feasible), nor because they were absolutely absent in local discourses, but also because they would be redundant indicators of the autonomy dimension of JQ.

8.4 Summary

On the whole, it can be established that the notion of JQ handled by Central American actors contains more aspects of consonance with Green and Mostafa's multidimensional framework, than aspects of dissonance.

At first glance, it could be argued that the aspects of work that participants more regularly associated to a quality job – income to secure basic food and shelter, job stability, and physical safety – assimilate more to a narrow basic needs idea than to Sen's capability approach. Based on the argument of 'adaptive preferences', it looks reasonable that in more impoverished contexts such as Central America, basic needs from work are perceived as more determinant of well-being than other needs that the literature typically places higher up in the hierarchy (e.g. belongingness, status, self-fulfilment).

Moreover, rather than irreconcilable cultural differences around the notion of JQ, the differential attention given to some aspects over others reflects the obstacles of the political discourse to evolve towards a more holistic approach and to commit with the improvement of those issues that remain invisible for the eyes of voters.

A second intriguing finding were the several additional items that informants systematically associated with the idea of a 'good job' but which do not have room in Eurofound's 'intrinsic' job quality framework, namely: employment creation, productivity, collective bargaining and union representation, eradication of child labour, workplace inspection and labour formalisation. Certainly, all these elements are important to achieve well-being but have not been included in Green and Mostafa's framework because they do not refer to features of the job itself. Moreover, as discussed in Chapter 2, they remind us of the conceptual confusion surrounding the concept of JQ, particularly that between drivers or outcomes of JQ with intrinsic job characteristics.

Among other things, the relevance attributed to these aspects reveals how legalistic is the notion of JQ in Central America, moreover how firmly it has entered ILO's decent work discourse. Indeed, as it can be gathered from the previous paragraphs, all the aspects commonly associated to JQ are strongly aligned with ILO's decent work agenda. Moreover, the 'decent work' concept was repeatedly brought in by participants from all sectors after asked about their understanding of JQ, evidencing high awareness of ILO's agenda in the isthmus, as illustrated in the following quotes:

> "In August 2014, we launched the National Employment Strategy, with the support of the ILO. That had three pillars: labour supply, labour demand and quality of employment. All these under the conceptual principle of decent work. We have taken the concept of decent work very seriously..." (Government, CRI)

> "It is a concept that is very much in the discourse of the actors, even among the most exploiters of employers, but it progresses very little because there are many vested interests." (ILO 1, CRI)

All countries in the region have signed a decent work agreement, "although there is a big gulf between adherence and application in countries like Nicaragua", an ILO official said. However, there was a substantial similarity between the eight 'fundamental rights' guiding the decent work agenda and the job quality aspects considered most relevant by the interviewees. Unsurprisingly, the infusion of the organisation's programme was particularly evidenced in the accounts of government officials, through statements such as:

> "...even for that reason the state is subjected to examinations every year in the ILO. When it is not child labour, it is forced labour; when it is not freedom of association, it is one of the other of the agreements." (Government/Scholar, GTM)

Although ILO's eight fundamental principles do not cover the same JQ dimensions proposed by Green and Mostafa, it's endorsement has led to an extension of basic labour rights that were not previously considered in many national laws. Nevertheless, one problematic aspect of the high influence that the decent work frame of reference has gained among local experts and policymakers is that it diverts their attention from measuring those intrinsic job features that should also be the focus of improvement (e.g. working time quality, autonomy, intensity, etc.).

Perhaps, of all the items considered within the decent work agenda, there is one that demands more attention: access to social security. It was to be expected that in countries where underemployment and informality rocket, public policy efforts are targeted to formalisation. On the one hand, if access to social security is interpreted as an extension of non-monetary rewards from work, it is not absurd to include the variable as part of the earnings dimension of JQ. However, this alternative entails a problem of international comparability, which is not as easily sortable as adjusting income by PPP. Capturing gross salary would be a better indicator in that sense because it would include social security payments. And yet another comparability problem would emerge because in some systems those payments are directly translated into benefits for the individual worker (e.g. unemployment benefit), while in other countries those payments are just revenue to governments that might be used for the welfare system or other government expenses. Furthermore, as noted in Eurofound (2012, p. 13), it seems that indicators of social security coverage relate more to the purpose of sustaining governments, rather than to intrinsic job characteristics whose purpose is supporting individuals' welfare.

It is acknowledged that some items used to capture informality can have an indirect impact on particular dimensions of JQ, or they can buffer the negative effect that a bad job has on physical and mental health. For instance, having access to state health protection can help to deal with lung illness caused by working in hazardous environments, breathing in smokes or other toxic substances. Similarly, having access to state unemployment benefits can help to increase job security through the social diversification of risk. Moreover, state provision of pension benefits could be considered – as Green and Mostafa point out – a deferred form of wages and so it would affect the relationship between financial income and well-being. Apart from protection from illness, disability, old age and unemployment, many other aspects can be included under the umbrella of 'social security'. In some cases, maternity and childcare benefits are also provided as part of the social protection scheme. All these conditions are exogenous to the job itself. If at all, they are external protection mechanisms to cope with potential risks resulting from a poor quality job. From that viewpoint, many experts on JQ agree that it would be accurate to identify them as indicators of the 'quality of welfare states' (e.g. Muñoz de Bustillo et al. 2011, Piasna et al. 2017).

More importantly, the impact of social security depends on the availability and quality of services and institutions providing such protection; a capacity that can vary significantly from one country to another. This fact, stresses the relevance of interpreting comparative JQ data *in context*. Muñoz de Bustillo et al. (2011:69) express this idea effectively: "In terms of structural differences, probably the main issue is the big diversity that exists in the design of social systems across countries. Employment is embedded within an institutional and economic context: the characteristics of employment interact with the features of social systems in ways that can make similar employment characteristics have very different implications for the well-being of the worker in different countries."

These remarks should not be taken in detriment of the proven effect that social protection has on workers' psychological well-being. Even if not attributed to essential job characteristics, "providing social protection for all is key", therefore, those policies "must also adapt to evolving forms of employment", as remarked in OECD's latest Employment Outlook (2017).

The third and last point to highlight is that local NGO representatives and scholars seemed more aware of the positive effects than less visible dimensions of JQ – intensity, autonomy, lack of abuse, social support in the workplace or quality of working shifts – can have on outcomes like job satisfaction, happiness, mental health and workers' turnover and productivity. Instead, those aspects of JQ seemed more unpopular among political campaigners.

The fact that these dimensions of JQ have weakly permeated in the discourse and practice of experts from other sectors does not mean that they do not have an actual impact on Central American workers' well-being. Sen's use of the 'adaptive preferences' theory is also useful in this regard. The unfamiliarity with the effects that these 'forgotten' job characteristics have on workers' well-being may be reflecting the normalisation of harsh conditions as an adaptive mechanism. Undoubtedly, the generalised lack of awareness of labour rights and weak prosecution culture does not help to visualise the relevance of these JQ aspects either, especially in a society where the approach to JQ is strongly legalistic. As an example of the conjuncture between the notion of JQ and rights disinformation, a study undertaken by the NGO FUNPADEM in 2007 indicated:

> "Between 66% and 58% of workers in Central America know that sexual harassment at work is prohibited and sanctioned, but there are countries where disinformation is worrying. In El Salvador, for example, 44.2% of respondents believe that this practice is not prohibited, and in Nicaragua 52% believe that rejecting the insinuation or sexual pretension of a superior or an employer may be grounds for punishment or even dismissal. Greater knowledge on the subject was observed to standout in Costa Rica and Panama." (PEN, 2008, p. 162).

In addition, there seems to be a factor of information management explaining the gap between the narrower JQ concept of some participants, and the more comprehensive JQ notion handled by

representatives of NGOs and academia. Interviewees from sectors outside ILO's tripartite structure were knowledgeable of the substantive effects that the 'forgotten' dimensions of JQ have on every worker's welfare, suggesting that the visibility of what is genuinely constitutive of a good job is directly related to the ability to measure those aspects.

Within this context, it seems pertinent to stress on the concern raised by some local experts about the lack of data to measure JQ through objective and comparable indicators as proposed in Eurofound's framework. Declarations like "there is no record on many other dimensions such as safety and hygiene, which hinders its visibility…" (Scholar, GTM) were recurrent in this regard.

In the same line, an expert in statistical information systems of the SIALC project of ILO in Panama, mentioned that Green's JQ framework was enormously relevant for the work of the organisation. However, they would have several operational obstacles if they were to implement it. The specialist explained that the decent work figures produced by the ILO must adhere to the decisions of the tripartite council representing the government, workers and employers. In words of our interviewee, these three sectors congregated under ILO's umbrella have determined not to calculate synthetic indicators like Eurofound's JQ indices, appealing to the fact that each country's reality is different. Such diversity means that they would face difficulties in deciding: (1) a minimum threshold to classify something like a good job; and (2) the corresponding weights for each dimension depending on the country. Nonetheless, the main obstacle, he followed, is that:

> "…There is little support from the ILO for this. Nowadays there is more freedom from the academic sphere. The SIALC program is only authorised to use official sources disseminated by governments and the others can only be used as a reference, even if they are methodologically well developed. This explains, in part, why we haven't developed job quality indices such as Green's. Instead, decent work indicators, which are more than 60, are obtained from the National Surveys of each country, and more than half can be obtained from the Labour Force Surveys." (ILO, PAN)

Although we saw in Chapter 6 that Costa Rica and Panama present a better enforcement capacity on their labour legislation and a higher institutional development in some respects, the concerns raised by their public policy representatives were not necessarily more sophisticated than those priorities raised by stakeholder in Honduras or El Salvador. Issues such as the quality of wages, physical safety, and employment creation seemed to be commonplace, and although the assumption may be correct in that the sophistication of labour policy priorities increases along with the level of development of the country, these differences were not as significant as to be grasped with the interview data collected. On the contrary, a variation in the ranking of priorities was more easily deduced between sectors, with academic and NGO actors often mentioning a more sophisticated battery of JQ components than government or enterprise representatives. Such differences are attributed to the level of information and evidence managed by the different sectors.

9 Conclusions: appraising a methodology for job quality

The broader interest surrounding this research lies in how work affects people's well-being. In general terms, and drawing on Amartya Sen's capabilities approach, we have agreed to label "good quality jobs" those that allow workers and their families to be and do what they value most, that is, that enable people to live a flourishing life. The capability approach emerged as a counter theory to other traditional approaches on well-being, such as the GDP approach (and similar resource-based approaches), the utilitarian approach, and even differs from – but is aligned with – the human rights approach. In the same line, it is argued that a JQ framework inspired in the capability approach originates as a counter model to those narrower theories equating 'job quality' to 'employment creation', 'high salaries', or to 'job satisfaction'. Moreover, this study suggests that a capability-driven model of JQ is also essentially different to the 'labour formality' approach deeply established in developing countries.

Although the literature has made easier identifying what a good job *is not*, there is less consensus about which elements are *constitutive* of a good job. The challenge of identifying the essential characteristics of an enriching job is a problem inherited from the very theory of capabilities, because, as White said, "there is no community of experts on what constitutes a flourishing life" (White, 2011, p. 91). For development policy purposes, it is desirable that whatever we agreed to be defining of a good job, can meet the following conditions: it must be worker-centred, measurable and replicable, intra- and internationally comparable, simple enough as to easy communicate to a lay audience, but complex enough as to capture the multidimensional nature of jobs. Moreover, since we are specifically focusing on the quality of *jobs*, the elements of the model must refer to the job itself, not to 'mechanisms' for job improvement, or to characteristics of the person holding the job, nor to characteristics of the macro-level context in which the job is performed.

In this context, the set of JQ indices designed by Green and Mostafa (Eurofound 2012) offer a promising way forward. However, the utility and validity of this model have not been tested anywhere else than Europe. The motivation of the current study was, precisely, to evaluate the extent to which a

multidimensional measure of JQ, theoretically anchored in the capabilities approach, is useful and valid to be adopted in contexts – structurally and culturally – different to those in which the framework originated.

Central America was selected as an ideal setting for this research, first, because the 2011 ECCTS offered a large-scale and harmonised dataset on working conditions and health; second, because the countries presented varying degrees of labour informality as an additional variable for JQ comparisons. Since the research had the two-fold objective of confirming JQ theory and exploring the institutional context through personal accounts, the study followed a mixed-methods approach, primarily based on the quantitative analysis of survey data and complemented with the qualitative analysis of semi-structured interviews with local authorities from different sectors.

This final chapter concludes the dissertation, though not the research. Its structure is as follows. First, I provide a synthesis of the subsidiary findings derived from chapters five to eight, analysing how these results help to answer the question about the validity of Eurofound's JQ framework in Central America. Second, I explain the contributions that this research brings to both study fields, the capability approach and that of job quality. Third, I discuss some of the limitations of the study, and possible ways of extending these findings through further research. Fourth and last, I emphasise on a few direct implications that these results have for public policy in Central America.

9.1 Is the Job Quality framework valid in Central America? A synthesis of key findings

This research takes four different avenues to validate Green and Mostafa's JQ model. First, we checked whether the indices of JQ captured the expected inequalities between groups of workers in Central America. Second, we discussed whether the indices capture reasonable differences with European countries and between the six countries of the isthmus, taking into account their social, economic, and political backgrounds, but also the capacity of their labour institutions. Third, we assessed if the indices were positively correlated with the well-being of Central American workers, specifically, with physical and mental health outcomes. And fourth, we explored whether the dimensions of JQ identified by Green and Mostafa resembled the current Central American political discourse about 'job quality'.

On the whole, we can be positive about the validity of Eurofound's framework in the Central American region. Specifically, the findings from chapter five and six were attuned to the literature and with previous empirical evidence about the JQ gaps that are to be expected at the micro and macro level. More importantly, the results of chapters seven and eight confirmed that our measure of 'job quality' was in great part correlated with workers' physical and mental well-being, and consistent with what

local actors deemed defining indicators of JQ (even if in occasions such congruencies were concealed behind a political discourse). One important caveat, though, is that the resulting correlations between the health indicators and the WTQ index were not exactly as imagined. However, as detailed in the following paragraphs, several justifications could explain this absence of correlation, without refuting the validity of Green and Mostafa's model but calling for further examination.

9.1.1 Whose jobs are the best?

Echoing the human-centred standpoint of the CA, one of the strengths of Green and Mostafa's system of JQ indices is that we can compute them at the individual level. This calculation allowed us to compare JQ averages by gender, age, educational level, self-defined ethnicity, and residence area, which were considered relevant socio-demographic variables correlated with JQ. It also made possible to assess the association between JQ and other socioeconomic variables captured by the ECCTS at the individual level, such as occupation, activity sector, firm size and even by the formal nature of employment conditions and economic sector.

The literature in the field of working conditions and labour market provides evidence that some workers' socioeconomic or occupational categories are associated with better quality jobs than other categories. Supporting the validity of Eurofound's framework, our results showed that the distribution of JQ among illustrative groups of Central American workers was consistent with prior findings, and looked reasonable in light of the background evidence gathered in other studies conducted in Latin America and Europe. As an example, the analysis confirmed that women in Central America were generally worse paid than men but had significantly better jobs regarding time quality and intrinsic features of work. Education resulted positively and strongly associated with the earnings level, working time quality, autonomy, and physical environment, but negatively associated with the social quality of the workplace, and work intensity in some cases. Also in consonance with the theory, workers located in urban areas reported significantly higher wages than those in rural zones but, on the contrary, often had poorer WTQ and IJQ compared to urban workers in most countries. The occupational gaps found also confirmed our expectations, with a marked JQ downward gradient between high skilled white collar workers and low skilled blue collar occupations. Lastly, the size of the firm also resulted positively related to earnings level and inversely correlated to IJQ, while the effect on WTQ was much less marked and variable between countries.

The findings also revealed that in Central America, the worker-level characteristics more strongly associated with JQ were education, occupation, firm size and gender. Moreover, in terms of effect sizes, these individual characteristics resulted more relevant than the country effect at explaining gaps in the IJQ dimension, a conclusion endorsed by other authors (Smith et al. 2008 in Muñoz de Bustillo et al., 2011).

Additionally, we confirmed that there are hardly identifiable groups of workers accumulating all the good or poor characteristics of a job. The most educated workers may be an exception because they systematically got the highest scores in all the three main indices: pay, WTQ and IJQ. On the contrary, for other illustrative categories of workers, it was difficult to find such accumulation of job amenities. Such multi-coloured panorama has further implications, the most important being the corroboration that JQ is a concept too complex and multifaceted as to be aggregated in one aggregated measure.

9.1.2 Which Central American countries perform best?

To further prove the external validity of Green and Mostafa's indices, in Chapter 6 we evaluated if the indices captured credible differences between the six countries of the isthmus regarding their ability to provide quality jobs. To that aim, we took into account the countries' different social, economic, and political backgrounds, as well as the varying capacity of their labour institutions. Muñoz de Bustillo et al. (2011, p. 17) point out the challenges involved in such exercise stating that "any international comparison has to deal with the problem of how to compare different realities in ways which are sensitive to national specificities (so that the national results capture the national realities) yet reasonably harmonized (so that the actual comparison can be made, and the reasons behind the differences can be understood)."

According to our results, Eurofound's indices proved to capture a large part of the international differences we expected. First, we found that both earnings and IJQ scores varied notably between the six Central American countries, with Costa Rica often ranking at the top and Honduras at the opposite end.

Central American countries differed less clearly in average WTQ. Even if we detected a statistically significant country effect on WTQ, this was small. Although the smaller international variability of WTQ compared to other dimensions of JQ was already evidenced in the European case, this finding stimulated the question on whether the similarities between countries WTQ were genuine or if the index was underestimating country differences. In this regard, we confirmed that the index was aggregating sub-indicators that, at occasions, behaved in opposite directions, thus reducing the overall variability of scores. While this is not incorrect per se and fits a principle of multidimensionality, it might entail some difficulties for interpretation that are worth bearing in mind. For example, if a country scored relatively higher than others in short-term flexibility, and at the same time scored relatively lower in the quality of working shifts, it would not be clear what – if any – conclusions a policymaker can draw from an index averaging both scores.

Furthermore, it was revealed that countries tend to vary their rank-order depending on the job dimension we consider. Similar to what we found at the individual level, there are no countries that

accumulate the highest averages in all aspects of JQ, nor countries that collect the 'worst jobs' in all dimensions. On the contrary, it seemed that pay level compensates for disadvantages related to working time and intrinsic job characteristics, especially in the Northern countries. This finding again supports Green and Mostafa's decision to leave their indicators as a system of indices instead of aggregating them in one measure.

Third, Green and Mostafa proved that their JQ indices produced meaningful comparisons between countries as different as Norway and Turkey. With that same logic, we would expect that a harmonised version of the indices registered reasonable comparisons between countries as diverse as those in Europe and Central America. Consistent with this hypothesis and with the substantial differences in GDP per capita between both regions, our results showed that all six Central American cases ranked at the very bottom regarding earnings level. A more original discovery was the way in which some Central American countries moved up in the rankings of IJQ and WTQ.

Fourth, in explaining the international asymmetries in earnings and IJQ, it was demonstrated that common development indicators such as GDP per capita only could define the variations in pay levels; while the rank order in the IJQ and WTQ scales did not seem associated with such conventional models.

Hence how could these indices be validity tested? We carried on by exploring the buffering role that some protective labour institutions could be playing behind countries' differing performance in JQ. Our results vindicated the idea that labour institutions and the state itself can have a determinant impact on JQ at the national level (e.g. Bensuán, 2009; Gallie, 2003; Green et al., 2013; Mosley & Singer, 2015; Nambiar, 2013; Payton & Woo, 2014; Westover, 2013). Rather than the sole existence of a comprehensive legislative framework on work, the interviews conducted pointed out to the enforcement capacity of labour inspection systems, trade unions and even by corporate codes of conduct of foreign investors. Some countries like Costa Rica showed more institutional capacity than others to implement their labour legislation, and such differential is likely to play a part in JQ asymmetries on average. These findings are in great part supported by the axioms of the CA, which stresses the instrumental role of institutions and the state in creating and protecting people's substantive freedoms (Robeyns, 2005).

9.1.3 Are good jobs associated with workers' well-being?

In Chapter 7 we evaluated the external validity of Eurofound's JQ indices, by determining if the list of features proposed by Green and Mostafa were positively associated with Central American workers' well-being as they proved to be with European workers'. While this is a correlation analysis only, the authors remind us that many causal links between JQ and well-being have been established in the previous literature.

The statistical analysis in Chapter 7 contributed to verify that the pay and IJQ indices were positively associated with the physical and psychological health of Central American workers. Although the well-being measures collected by the 2011 ECCTS and the 2010 EWCS were not the same, the magnitudes of the relationships we found between these indicators and JQ were as small as the ones reported for Europe. It was more original to discover that on three out of the four well-being indicators analysed for the Central American sample, the IJQ dimension had a relatively larger effect than the level of earnings.

The most uncertain outcome was that, for Central American workers, having a working time more conducive to work-life balance did not have the expected positive effect on their well-being. Contrary to the European evidence, we found a negative, weak or null association between the WTQ scale and workers' health across all countries of the isthmus. A deconstruction of this scale into its components further revealed that the most problematic items were the number of weekly hours of work, shift or night work, and the autonomy to decide the working schedule. We considered several alternative explanations in this regard. Here I recall some of the clarifications that could be brought forward with the data available and those that made some sense under the lenses of the capability approach. In section 9.3, I comment on alternative explanations that could not be ruled out with the current data and that demand more examination.

One logical explanation considered was that the relationship between well-being and WTQ was confounded by other amenities associated with long-hour jobs or night work. For instance, jobs in policing, health care and other activities in the tertiary sector can get higher wage premium, safer physical environments or even a stronger sense of fulfilment. However, even after controlling for some of these variables through the inclusion of the earnings and IJQ items, the long hours and night shifts continued to be positively or not at all related to workers' health.

Then we tested the hypothesis of a curvilinear relationship between WTQ and well-being, exposing a quadratic association between such index and two of the health outcomes analysed: self-perceived health and physical conditions. Upon closer inspection, we saw that in a few countries such curvilinear relationship occurred with the number of hours in particular: either very short hours or very long hours of work were detrimental for self-perceived and physical health; a result that would require rethinking if the linear scoring of this item is the most adequate.

Finally, to rule out that the differing behaviour of the WTQ index between Central America and Europe was caused by irreconcilable cultural differences, we looked at the same associations between working time and well-being but on a subsample of how low-income European nations. From this exercise, we reasoned that, rather than cultural differences, there appears to be a developmental gradient affecting the strength of the WTQ impact on well-being: the more affluent the context is, the stronger is the positive impact of good working time on workers' well-being. Having an organisation of working time

– supposedly – more conducive to work-life balance, appeared less determinant for other dimensions of well-being among workers of more deprived contexts. Furthermore, we saw that the well-being effects of the pay dimension became relatively larger in more impoverished contexts compared to wealthier settings. Such results seem even more plausible within the theory of adaptive preferences. It is likely that in contexts where workers are too deprived of good quality working time, the satisfaction of such a need is excluded from their horizon of possibilities, providing the biased impression that having the time to play, rest, or spend with family is not truly relevant for their well-being.

The developmental gradient observed on the association between WTQ and workers' well-being makes even more sense under the possibility that there are certain 'conversion factors' intervening in the transformation of good quality working time into actual functionings. The intervention of variables like public policy and labour regulation mentioned by Sen (1990) and Robeyns (2016) resonates with strength in light of our results. Crompton (2006) also suggests that state regulation and welfare regimes are factors that affect individuals' capacity to articulate work and non-work activities. In particular, she mentions that state regulation to shorten working hours and provide childcare may play a decisive role in converting WTQ to better work-life balance. If public policies and laws which are conducive to work-life balance are stronger in developed European countries than in Central America, then the observed lack of association between WTQ and well-being in the latter is credible, while the index is still valid.

9.1.4 What do good jobs look like from the perspective of local policymakers?

In Chapter 8, we assessed if the set of JQ indices used by Eurofound was attuned to the socio-political discourse about job quality held by Central American actors. The interviews conducted in this regard revealed that there was a great convergence between the discourse of local policymakers and Green and Mostafa's model, particularly concerning the importance attributed to aspects of payment, a safe physical environment and job security. These were deemed essential work-related capabilities, irrespective of the country or sector interviewees represented.

Nevertheless, it was also revealed that other aspects of the holistic JQ framework supported in this study face difficulties to permeate in the local public policy realm. We perceived that some political discourses struggled to evolve from the *basic needs* or from a *legalistic* approach to a more comprehensive and multidimensional conception of the 'good job' that included dimensions such as the quality of working time, autonomy, support from supervisors and co-workers or even the degree of intensity.

On the contrary, interviewees systematically associated 'job quality' with concepts of employment creation, productivity, collective bargaining, eradication of child labour, workplace inspection and formal labour. In Chapters 2 and 8, we presented some of the reasons why these concepts are differentiated or excluded from a capability-based JQ model (basically because they do not refer to the

job per se or because are not centred on individuals' well-being). Most of these competing policy priorities (even if necessary) have gained increasing attention from policymakers, especially under the umbrella of the 'decent work' agenda installed by the ILO.

Overall, the interviews revealed key concerns of policy makers, some of which are directly included in Eurofound's JQ framework (e.g. pay levels, stability, physical safety) and others which pertain the broader field of 'employment quality' (e.g. unemployment rates, productivity, social security coverage, outsourcing, etc.), or that relate more to causes of better or worse working conditions than the substance of the job (e.g. unionisation and workers' organisation). It could be argued that Eurofound's model is not adequately capturing what is needed because its indicators are clearly not including all the variety of dimensions highlighted by stakeholders and that can be common in developing countries. However, as discussed in Chapter 2 (section 2.2.1), a model of JQ can be more useful if it differentiates from other policies that address other aspects of the quality of the labour market, that is, without mixing the different levels of analysis (Piasna et al. 2017). Therefore, the fact that many of the actors show concern, for example, with social security coverage, must be interpreted not as a challenge to Green and Mostafa's specific framework but setting the notion of JQ in the context of a wider notion of 'employment quality'. The suitability of Eurofound's indicators to the context of developing countries is proven, to a great extent, through the statistical analysis undertaken in Chapters 5, 6 and 7. The political obstacles (and also the opportunities) to implement and use such indicators in the practice are revealed in Chapter 8. In a nutshell, it is adequate to measure JQ using this methodology but it is difficult to implement it in practice given the deep-seated discourses of some stakeholders.

Meanwhile, other intrinsic job aspects were greatly omitted and unmeasured. However, rather than interpreting such omissions as experts' verdicts about the irrelevance of these things for workers' health, we should attend the idea that these aspects are somewhat unpopular from the perspective of political campaigners and involve competing interests from employers, governments and unions. Differently, we noticed representatives from the academia and NGOs were more familiar with the positive effects that these 'forgotten' job capabilities have on workers' well-being. In turn, that led us to highlight the impact that evidence and measure can have to put the subject on the table.

As Wood and Burchell (2017) point out, psychologists often agree that apart from time structure, social support or personal contact, things like respect, mutual goals or meaningfulness of work may also boost workers' psychological well-being. The possibility that local experts had considered these types of aspects essential to the notion of JQ would have, somewhat, challenged Green and Mostafa's framework. However, the fact that did not emerge in any of the interviews with local authorities suggests that the socio-political discourses differ somewhat arbitrarily between regions. Rather than dismissing the evidence about the actual benefits that a fulfilling, meaningful or respected job can have on the well-being of workers and their communities, Green and Mostafa's decision to exclude these items from a

JQ scheme lies on the difficulty to capture such job characteristics through more objective indicators. In this regard, the work of Van der Klink et al. (2016) or Abma et al. (2016) poses some new avenues to capture this type of capabilities from work more objectively, strategies that may be worth bearing in mind for future research. For the moment, it seems advisable to support Green and Mostafa's decision based on three facts. First, the subjectivity problems entailed in the concept of meaningfulness or self-fulfilment. Second, the null mention of these aspects among local policymakers. Third, the inclusion that has already been made of other objective measures like autonomy, which are correlated with meaningfulness.

9.2 Why do these findings matter?

Before we analysed the ECCTS data and before we conducted the semi-structured interviews with local policymakers and experts, we did not know if a multidimensional and capability-based framework on JQ would be valid in Central American countries. Moreover, we did not know whether such an approach would be more useful than an informality framework, which is deeply rooted in Latin American policymaking. These breakthroughs can be highlighted as the main contributions of the research.

Given that Eurofound's JQ framework had not been tested elsewhere, this study came to fill an essential gap in the evidence. There are just no precedents on a comparative analysis of this kind in Latin America. The few JQ studies that exist in the region only cover national samples, while those that have attempted to include a greater number of countries draw on very different conceptions of 'job quality'. Undoubtedly, the lack of harmonised data on working conditions and health in less developed contexts has obstructed the application of Eurofound's JQ model on a global scale. Despite that it was done for illustrative purposes only, the explorative comparisons we undertook between Europe and Central American countries helped to emphasise the potential scope of a policy tool like the one proposed by Eurofound. With Green and Mostafa's model, we can monitor countries and regions with such different economic backgrounds under the same standards; standards that focus on workers' well-being and the substantive freedoms that a job should secure them. These comparative analyses often attract much scepticism from academics due to the striking differences between the countries involved. Notwithstanding, our research findings suggest that those intrinsic job characteristics that are central to the well-being of Costa Rican workers are also determinant for those in El Salvador.

This research also contributes directly to expand the application of the CA within the work realm by better defining the notion of work-related capabilities, which very few scholars have explored. The decision to use a mixed-methods approach that complemented the survey data with semi-structured interviews was determinant for evaluating the validity of Green and Mostafa's model taking into account institutional and socio-political factors. The combination of statistical findings with local discourses about JQ and well-being made our conclusions more robust and context-embedded.

Indeed, a unique contribution of this study to Green and Mostafa's work was to bring institutional-level factors into play to explain differences in JQ between countries. Apart from considering countries GDP per capita and the so-called 'Sacandinavian-effect', Eurofound's report (2012) did not explore possible causes of the differences in JQ between the 34 European countries analysed. Taking advantage of the reduced number of country cases comprising the Central American continent, we were able to explore if a nation's ability to provide intrinsically good jobs was more closely associated with the capacity of its labour institutions (e.g. trade unions, LISs, and the state itself), or with their economic development. Although such exercise was done without pretention to draw generalizable conclusions, it opened new possible avenues to analyse the correlation between JQ at the country level and macro-level indicators on a larger sample of countries.

In addition, the analyses of Chapters 5 to 8 revealed other novel findings that make up a significant contribution to the scientific literature on labour informality. In Chapter 5 we saw that the 'truly bad jobs' are not necessarily the most informal jobs, just as the best jobs do not always entail formal arrangements. On the contrary, there was considerable overlap between the JQ distributions of formal and informal categories of work. These findings discredit the *dualist* or *productive* approaches which suggest that the so-defined 'informal sector' accumulates the poorest quality jobs. The results also debunk the *legalist* theories of informality and their neoliberal applications which propose that people voluntarily chose formal employment arrangements in exchange for higher earnings, better WTQ and IJQ. Then in Chapter 6, we confirmed that, at the country level, average JQ was not directly associated with the size of the informal sector either. Furthermore, the regression analyses in Chapter 7 led us to establish that the positive health effect of performing an intrinsically good job is greater than the effect of working formally. Lastly, in Chapter 8, we evidenced how contentious can be to assess workers' well-being from the perspective of the formal/informal nature of the job, while local policymakers continue to embrace such model.

On the whole, these findings contribute to highlight the relevance of multidimensional and capability-based measures of JQ as compared to conventional indicators of informality. All in all, the advantage of Eurofound's multidimensional model is that it allows us to capture the heterogeneity of working conditions under both formal and informal conditions, that is, to overcome a unidimensional perspective of development in the sphere of work. The selection of Central America as research setting was paramount to identifying the 'truly bad jobs'.

Undoubtedly, monitoring informality is still of primary importance for other development purposes at the national level, such as keeping a healthy tax base and a national accounts system or guaranteeing access to social security to every worker. However, one of the problems surrounding the notion of informality is, precisely, that it is not always clear whether formalisation efforts – like those widely promoted by the ILO – are aimed at sustaining individuals or governments' welfare. The fact that the

notion of formality lends itself to colliding interests is probably the cause of the multiple different definitions associated with it. Such polysemy, in turn, has rendered the model useless for international comparisons, despite that the ILO has put considerable effort in assisting governments towards the harmonisation of their informality measures.

The mechanism by which labour informality could be more closely associated with JQ is the perception of job security and career advancement generated by the possession of a specific type of labour contract. These are elements that are included in Green and Mostafa's model under the "prospects" index. If such index had been computed with the ECCTS, it would probably yield a strong positive correlation to formality. However, the latter still captures aspects that are not directly attributable to the job itself. By noting that some protective institutions such as health, pensions and state benefits are 'instrumental' rather than substantive freedoms, the CA helps to make an explicit distinction between JQ and quality of the welfare system.

9.3 Limitations and implications for further research

The exercise of validating Green and Mostafa's JQ framework also sheds light on the ways this can be perfected towards a wider scope of application. Overall, the findings allow us to be positive about the use of compatible JQ indices to capture the concept of 'good job' in more developing contexts like Central America and to compare the quality of jobs across countries. Nevertheless, any international replication process needs to be done bearing in mind all possible caveats, so that it does not translate into a naïve adoption of foreign models.

As mentioned in Chapter 4, one obvious limitation to our findings is imposed by the cross-sectional nature of the ECCTS. Only conducted once, this survey provides just a snapshot of JQ and well-being in Central American countries as of 2011; therefore it does not allow us to extract any conclusion about the causal mechanisms between JQ and health outcomes. The fact that we could not control for a "healthy worker effect" to explain the unusual correlations between WTQ and physical and mental health, also can be attributed to the cross-sectional type of data.

In this same line, there are several other disadvantages about the ECCTS that prevented clarifying the somewhat confusing results between WTQ and well-being. Although we hypothesised about possible causes that do not invalidate the model, this is an aspect that requires further investigation.

For instance, although the survey aimed at covering salaried and non-salaried workers, many of the items comprising the WTQ index (e.g. time control, and short-term flexibility) were omitted for a large part of the population for being self-employed. Besides, the scale was computed with fewer variables

than the eight used in Eurofound (2012), rendering it slightly more unstable than initially conceived, which could also explain its weak association with health outcomes.

The fact that we did not observe the expected effect of WTQ on well-being may also lie on the inadequacy of health indicators analysed. Unfortunately, the ECCTS did not collect information about additional well-being outcomes that could be more directly associated with WTQ, such as self-reported work-life balance, job satisfaction, happiness, consumption, leisure time, time with children, etc. This is a caveat worth considering insofar a comprehensive idea of JQ does not only pertain the wellbeing of workers; it is also expected to affect the wellbeing of their families and, to a lesser extent, of their communities (e.g. keeping them from poverty, ensuring working hours compatible with parenting and social capital building).

Apart from the lack of variables covering WTQ or wellbeing, we said in section 9.1 that there might be some confounders affecting the relationship between well-being and aspects like long hours, night work or control over working time. Although some of those variables were accounted for, others remained unaccounted because they were not collected in the survey, for instance: self-fulfilment from work, commuting times, or even the anxiety experienced by lack of time structure. Crompton (2006, p. 94) refers to a similar problem when argues that 'work-life balance' is not so much dependent on the number of individual working hours, as it may be from the total working hours spent by the household group, therefore it is advisable that future research considers factors concerning household arrangements or the number of dependants.

Another major limitation of the ECCTS for this research is that it did not collect the relevant variables to measure 'job prospects', namely: fear of job loss, prospects for career advancement, employment category (self-employed without employees, self-employed with employees, employed, other), and type of employment contract. 'Job prospects' is a dimension that Green and Mostafa – like many other models – deem essential in terms of JQ; therefore its inclusion in future surveys is a must if we were to test the validity of Eurofound's model outside Europe. Furthermore, the loss of the 'prospects' dimension in our analysis could also explain part of the puzzling associations obtained between well-being and the WTQ index. Specifically, by omitting this variable, we were not able to rule out that the adverse well-being effect of working shorter hours was caused by higher job insecurity or fewer opportunities for career enhancement, disadvantages that are often associated with part-time workers.

As with prospects, there were other losses in the ECCTS that should be born in mind for future data collection. For instance, many authors highlight that a fair salary is constitutive of JQ and direct determinant of workers' psychological well-being (e.g. Hudson, 2002; Mussman 2009 in Muñoz de Bustillo et al., 2011; P. Warr & Wall, 1975). Fairness of wages refers to being paid (1) in accordance to one's effort (hours of work and intensity), skill, responsibility, outcomes, and risk-taking; and (2) in

accordance to the reward received by others doing the same job in similar circumstances. Kahneman et al. (1986) provided crucial supporting evidence for including income fairness as an aspect of JQ, by demonstrating that people generally act to maximise the fairness of wages, rather than their profit. Still, the definition of how many and what particular inputs are to be rewarded makes very complex to construct an indicator of fairness. As in the EWCS, the ECCTS did not include the necessary variables either.

9.4 Policy implications for data collection and analysis on job quality

This study builds on the CA to suggest that increasing the incidence of good jobs should be pursued as an end in itself; not only as a means to higher productivity and wealth. In many ways, a multidimensional indicator of JQ computed at the individual and country level can be a practical and applicable tool for policymaking in the field of labour. Only to quote a few examples, it allows one to identify the main inequalities within labour markets beyond the formal/informal nature of the job. It also makes possible to establish meaningful comparisons between countries regarding their capacity to create good quality jobs. And it facilitates the understanding of the role that labour institutions play in the association between JQ and well-being, thus helping to identify holistic mechanisms for enriching workers' physical and mental health.

Imaginably, using data from 2011 to guide current JQ policies in the isthmus is far from ideal. In this sense, it may be worth reminding that the ultimate motivation for using the 2011 ECCTS survey was to show how this type of questionnaires can be a valuable tool to measure JQ. In other words, the Central American data here analysed was for illustrating purposes rather than for deriving specific policy recommendations targeted to the most disadvantaged groups of Central American workers. Despite the limitations above mentioned, the 2011 ECCTS must be praised as a first valid step in this process; and the validation exercise done in this study should be interpreted as the second necessary step for effective policymaking. One relevant policy implication of this research is, precisely, the need to produce internationally comparable data that contributes to visualise the most forgotten dimensions of JQ and their impact on workers' health. Arguably, much of the international discrepancies on what constitutes a good job come from the lack of large-scale and comparable data, which is why this call becomes such a vital epilogue to this thesis.

As for the findings concerning the informality approach, two practical recommendations can be made. First, that informality indicators remain as a separate type of measures, with a purpose and application different from JQ. Considering that registered labour is more likely to comply with a nation's tax system, the stance adopted in this study is that informality indicators are instead used strictly for economic

purposes, but no longer to inform about the intrinsic quality of jobs that are being created. Second, that informality indicators, particularly those referring to state-provided social protection, are considered as contextual information when interpreting the effects of JQ on workers' well-being. Using informality indicators – at both individual and country level – as control variables would be one useful alternative.

That being said, it must be reminded that through the inclusion of a variable on the type of labour contract, Green and Mostafa's JQ scheme already covers some of the contents of informality that can have a more direct impact on workers' well-being. Arguably, the possession of a written labour contract implies that employment conditions such as the salary level, working hours and workload, are more stable and accountable to a third party. Specifically, the authors include a contract item as a proxy for job continuity, as well as to capture the vulnerability associated with unregulated work. Therefore this element should suffice. It would only require that results are interpreted in light of the corresponding institutional context, because in some cultures the sole existence of a written labour contract may be not as binding as in cultures with a firm rule of law. Thus, the combination of this variable with more direct indicators on job security and career advancement is essential.

Employer contributions for old age pension can also be considered a form of deferred wages, as Green and Mostafa note, and their inclusion in the pay index would surely cover some of the concerns surrounding formality and informality. However, the conversion of pension benefits into current monetary value can be cumbersome. If this indicator were to be included in future JQ surveys, at least two precautions are to be taken. First, it should be contemplated that the item on earnings level refers exclusively to 'net income' to avoid overestimating old age pensions reward. Second, that the survey strictly identifies whether the subsidiary rewards from work are provided by the employer or the state.

On a different note, the analysis in Chapter Six suggests that the average quality of jobs in Latin American countries is likely to change more as a result of the expansion of institutional capacities than as a result of other factors. One main implication is that increased productivity and economic growth will not necessarily derive into better jobs other than possibly raising their average salary level. This does not mean, however, that economic growth is only achievable in detriment of lowering JQ and loosening labour rights protection. On the contrary, evidence from other countries suggests that the creation of good quality jobs and labour rights protection can boost productivity levels, whereas the reversed causation cannot be assumed.

Similarly, it should not be assumed that policies aimed at shrinking the agricultural sector while expanding the service sector and investing in high-technology industries will automatically improve the average quality of the jobs in a given country. The evidence in Chapter Six indicated that the differences in the average JQ between countries was only partly explained by their different industrial structure.

Another relevant inference for local policy-makers is that, in general, JQ will not improve by means of simply generating employment or taking for granted that "any work is better than no work", especially if such employment policies push the poor, inactive or underemployed into precarious activities and unsupported self-employment. Moreover, in Chapter Five it was evidenced a lack of relationship between informality and aspects of a "bad quality" job. On that basis, the ILO's recommendation to formalise informal workers is not reasonable if the ultimate aim is to improve workers' wellbeing. The expansion of formal jobs has more to do with other aspects of the broader concept of "employment quality" which are not necessarily related with the substance of the job itself. From our perspective, the ILO's proposed programme of "decent work" as an alternative to "informality" is not feasible because both aspects refer to different dimensions and levels of analysis. The fact that we can have formal and yet poor quality jobs, or have very good quality jobs and still have a limited taxation base, is perhaps the best explanation of the lack of success of ILO's policy approach. Arguably, both types of policies are desirable – ensuring access to social security to every worker and improving JQ – but they respond to different needs, therefore each type of policy ought to be formulated on its own. Social security coverage can be crucial in the idea of formalisation, but this is not included in the model of JQ, precisely, because it addresses a different issue that does not pertain the contents of the job.

It can also be concluded that the sole expansion of labour legislation and adherence to international conventions on labour rights is unlikely to improve JQ at the country level. If any relationship were to be proved, the evidence rather suggests that reinforcing the capacity of labour institutions like the Labour Inspection System, workers' organisation, and the very role of the State, are one of the best avenues to improve the average JQ at the country level. Policy programmes aimed at diversifying the areas of intervention, professionalization and transparency of labour inspectors; or policies directed to expand the intervention agenda of trade unionists, their demographic composition, and their protection from persecution, would probably work better in a context where the notion of the "good job" is closely attached to the notion of "complying with the law". In the same line, our results about the positive impact that FTAs and labour rights protection can have on JQ in cases where the State adopts a compliant role are backed up by the literature referred in Chapter Two, and suggest that the improvement of JQ is not necessarily achieved by preventing countries to participate in the global economy. Instead, our evidence proposes that FTAs can improve working standards in many respects when the State assumes an active role in ensuring compliance with international standards, which can be considered the minimum base for the creation of good jobs.

Policy programmes focused on expanding the capacities of these type of labour institutions could also counteract on the detrimental flexibilisation of the formal sector. Put differently, the enforcement of existent legislation regarding the extension of working hours, workplace harassment, workers' involvement in decision making, or intensification levels could re-draw the line between the formal and informal sector as the sector of good and worse jobs respectively.

One last practical recommendation for policymakers aimed at improving our labour force' well-being, would be to focus on measuring and then targeting those job characteristics that showed to have a larger impact on workers' physical and psychological health. Such goal should be given more attention than simply pushing workers towards formalisation. Naturally, our call is also for an expansion of the responsibilities of the relevant labour institutions, such as trade unions, workplace inspection, employers, as well as a greater engagement of NGOs and academia representatives in making these work-related capabilities visible and monitored.

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Appendix

Harmonisation of 2011 ECCTS and 2010 EWCS datasets

The pooled sample used for the comparative analysis between Europe and Central American countries is comprised of 55,458 observations (12,024 from the ECCTS and 43,434 from the EWCS). Since the Central American survey covered individuals aged 18 or over, all European cases younger than 18 years or that had a missing value in the age variable were removed (382 observations in total). In what follows, I describe the codification and computation of the harmonised indices of JQ. Table A.6. shows the mean and standard deviations of the harmonised indices by region.

Harmonised Earnings Index

This index is measured as the common logarithm (base 10) of monthly earnings in US dollars, adjusted by Purchasing Power Parity (PPP). The Euro/USD conversion rate used to equalise the values of the EWCS to those of the ECCTS was 1 EUR = 1.3771 USD, correspondent to the rate valid as of 1st March 2011.[117] The PPP conversion rates were those of 2011 provided in the World Bank's World Development Indicators Database. The treatment of outliers was the same used with the Central American data, that is, winsorizing the top and bottom 0.1% of each regional sample.

Harmonised WTQ Index

The first component of the harmonised WTQ index – duration of working hours – was coded exactly as in the original index because both datasets allowed it (see Table A.1)

The component pertaining conducive scheduling was composed of one item relative to night work and other for weekend work. These variables had to binary coded to make them comparable: we assigned a value of 100 if there is absence of night shifts and a value zero otherwise; likewise, we gave a score of 100 to those who reported that never work on Sundays or Saturdays, and a score zero otherwise. In Eurofound's version, Sunday and Saturday work were included separately. Here, however, both variables were combined in a single 'weekend' item to enable better comparison with the Central American data, which registered weekend work through one question only (*a19*).

The third component – discretion over working time – excluded self-employed to make it comparable to the ECCTS. The item was coded as a binary variable assigning the value zero if the schedule is 'always set by the company without possibility of change' and value 100 otherwise.

The wording of the items concerning short-term flexibility was too different between both surveys as to consider them comparable: while the EWCS refers to "take an hour or two off", the ECCTS refers to "request a day off". Therefore, the harmonised WTQ index was calculated as the simple average of the three items aforementioned, spanning from 0 to 100.

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[117] Exchange rates were obtained from http://www.exchangerates.org.uk/EUR-USD-exchange-rate-history-full.html.

Harmonised IJQ Index

The harmonised IJQ index was measured as the average of the same four subscales originally designed by Green and Mostafa: physical environment, social environment, appropriate work intensity and skills and discretion. The codification of the answer categories, however had to be modified and a few items excluded in order to make the indices comparable between the European and Central American datasets.

The **social environment** sub-index was calculated as the average of two same components used in Eurofound (2012) – social support and non-abusive behaviour – but in a much more abbreviated version. The ECCTS only included five of the fourteen variables originally used by Green and Mostafa in this scale, of which only three were apt for comparison (see Table A.2).

First, the social support component was computed as the average between colleagues' support (*q51*a and *c39a*) and manager's support (*q51b* and *c39b*), and normalised to a 0-1 scale.

Second, social abuse was measured through the generation of a single dichotomous variable relative to physical violence (*q71a* and *d41a-d41c*). This variable needed further codification because in the EWCS this indicator referred broadly to "physical violence", whereas in the ECCTS it was split into three different questions that distinguished who committed the act of physical violence, i.e. violence from co-workers (d41a), violence from people related with the workplace like patients, students or inmates (d41b), and violence from criminals (d41c). These three variables were collapsed into a single indicator, assigning the value zero if there was no occurrence reported in all three questions, and the value 1 if violence was reported in at least one of the questions.

Ideally, the item about social abuse would combine indicators of physical violence, unwanted sexual attention, bullying, threatening behaviour, etc. Despite that the ECCTS did capture subjection to unwanted sexual attention (*d41d*) and subjection to threats and humiliating behaviour (*d42c*), the wording of these questions varied considerably from the correspondent European versions (*q70b* and *q70c*, respectively), limiting their comparison. The main difference is that the Central American survey used "over the last 12 months" as the timeframe, while the European survey referred to "over the last month". Furthermore, in the EWCS the variable about threats and humiliating behaviour was binary coded, whereas the ECCTS used a 5-point scale of frequency from "never" to "daily". Following the most conservative approach, these variables were excluded from the social environment sub-index.

The **physical environment** sub-index was measured as the simple average of ten items that were common in both datasets, namely: exposure to vibrations; noise; extreme temperatures (without distinguishing between high or low temperature); breathing in smoke, fumes, powder or dust; tobacco smoke; handling harmful or toxic substances; working in tiring or painful positions; movement of heavy loads; work standing; and doing repetitive movements.

Both surveys used a different response scale for these items, and the only one in common was the category signalling no occurrence (see Table A.3). Therefore, that category was scored as 1 and all the others as zero. This was considered the least arbitrary approach to equate both scales.[118] Missing observations were treated as 'never' following Green and Mostafa's criterion.

[118] Several different matching procedures were tested to equate the response scales. In some cases, the mean score of the physical environment aspect increased more than 10 points for each region, but the relative gap between Europe and Central America was maintained, confirming the robustness of the sub-index.

Since the EWCS asked separately about the exposure to high *and* low temperatures, both items were combined in one single codification that assigned a score 1 if the respondent answered 'never' in both questions (*q23c* and *q23d*) and 0 otherwise.

The harmonised **work intensity** sub-index was computed as the simple average of the same five components included in the ECCTS version: speed of work; tightness of deadlines; number of work pressure sources; adequacy between workload and working time; and demands from emotional and value conflicts. The questions about speed of work (*q45a* and *c35a*) and tightness of deadlines (*q45b* and *c35b*) had a different number of answer categories in each survey – 5-point scale of frequency in the ECCTS and a 7-point scale of frequency in the EWCS – therefore they were normalised to a 0-1 range as shown in Table A.4.[119]

Next, the component relative to the number of work pressure sources was comprised of the same 5 items used in the Central American version, which refer to whether the pace of work depends or not on: the work done by colleagues (*q46a* and *c36b*); direct demands from people (*q46b* and *c36c*); the number of production targets (*q46c* and *c36d*); the automatic speed of machines (*q46d* and *c26a*); or on the direct control from the boss (*q46e* and *c36f*). Since in the EWCS the items had a dichotomous answer ('yes' or 'no') and in the ECCTS they were answered in a 5-point scale (from 'always' to 'never'), the coding was modified. The criterion followed was to recode the latter group of items into binary values, imputing 1 to responses 'always', 'often' and 'sometimes', and a zero to responses 'rarely' and 'never'.[120]

The fourth and fifth components of the work intensity scale – having enough time to get the job done (*q51g* and *c35c*) and emotional and value conflicts (*q51p* and *c34d*) – did not need recoding because they matched entirely between both the 2011 ECCTS and the 2010 EWCS.

The **skills and discretion** was calculated as the average of the following items: training provided by the employer or the company; complexity of the tasks performed; autonomy to choose the order of tasks, the methods of work, the pace of work, and to implement their own ideas at work. The response attributes of all these variables were normalised to a 0–1 scale.

The wording of the question about training varied between datasets (*q61a* and *c37b*), inasmuch as the ECCTS did not distinguish between paid training provided by the employer and on-the-job training. Yet the variable has been used to assess the provision of training as a whole. In addition, since in the EWCS dataset the variable was coded as binary (1 for "yes" and 0 for "no"), and in the ECCTS it was coded as a 5-point scale of frequency, it was necessary to convert the latter into a dichotomous variable. This was made by imputing the value 0 to answers "never" and "rarely", and the value 1 otherwise.[121] The same procedure was followed to equate the response attributes of the variables about autonomy to choose the order of tasks (*q50a* and *c38a*), the methods of work (*q50b* and *c38b*) and the pace of work (*q50c* and *c38c*).

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[119] One limitation of the normalisation procedure followed here is that we somehow assume that European and Central American workers experience and report things equally. Other researchers may suggest a more stringent criterion: omitting all the response levels other than 0 ('never') and analyse 'never' versus all other number of occurrences.

[120] An alternative coding procedure would have been to match only the category "never" to "no", and code all the other categories as "yes" for they show at least one occurrence. The difference in means between Europe and Central America remained, however, robust to such modifications.

[121] Different cut-off points were tested. In this set of variables, the results obtained were more sensitive to changes in the cutting points. For instance, if only the response categories "always" and "very often" were matched to a "yes" and scored 1, the mean was 54.9; if the response category "sometimes" was also scored 1, the mean increased to 63.0; and if the answer category "rarely" was also scored as 1, the mean went up to 67.4.

Table A1: codification of variables relative to the quality of working time

EWCS question	Variable attributes	Score	ECCTS question	Variable attributes	Score
q18_How many hours do you usually work per week in your main paid job?	0 to 19 hrs. 20 to 37 hrs. 38 to 41 hrs. 42 to 47 hrs. Over 47 hrs.	100 75 50 25 0	*a18_How many hours do you usually work per week according to your experience during the last four weeks?*	0 to 40 hrs. 41 to 45 hrs. 46 to 48 hrs. 49 to 60 hrs. Over 60 hrs.	100 75 50 25 0
q32_Normally, how many times a month do you work at night, for at least 2 hours between 10.00 pm and 05.00 am?	0 times At least once a month	100 0	*a20_What kind of shift or (regular) schedule you have at work?*	Divided (morn. & aft.) Continuous (8-15 hrs.) Continuous (13-21 hrs.) Continuous (22-6 hrs.) Rotating, except night Rotating, including night Irregular or variable shift	100 100 100 0 100 0 0
q34_How many times a month do you work on Sundays?	Never 1 day 2 days 3 days 4 days 5 days	100 0 0 0 0 0	*a19a_What days of the week do you work?*	Mon to Fri Mon to Wed Mon and Thu Mon, Wed and Fri Wed to Fri Mon to Sat	100 100 100 100 100 0
q35_How many times a month do you work on Saturdays?			a19a_*What days of the week do you work?*	Mon to Sun (everyday) Tues to Sat Wed to Sun Wed and Sat Sun to Thu Only weekends/holidays	0 0 0 0 0 0
q39_How are your working time arrangements set?	Set by the company… Choose between fixed sch. Adapt within certain limits Determined by yourself	0 100 100 100	*c37c_How often…? Working schedules are set by the company with no possibility of change.*	Always Often Sometimes Rarely Never	0 100 100 100 100

Table A2: codification of variables relative to the quality of social environment

EWCS question	Variable attributes	Score	ECCTS question	Variable attributes	Score
q51a_Please select the response which best describes your work situation: Your colleagues help and support you.	Always Most of the time Sometimes Rarely Never	1.00 0.75 0.50 0.25 0.00	*c39a_How often you can get help from colleagues if you ask for?*	Always Most of the time Sometimes Rarely Never	1.00 0.75 0.50 0.25 0.00
q51b_Please select the response which best describes your work situation: Your manager helps and supports you.			*c39b_How often you can get help from superiors / managers if you ask for?*		
q71a_And over the past 12 months, during the course of your work have you been subjected to physical violence?	Yes No	0.00 1.00	*d41a_In the past twelve months when you've been at work, have you been subjected to the following? A. Physical violence committed by people who work with you.*	Yes No	0.00 1.00
			d41b_B. Physical violence committed by people related to your workplace (patients, students, inmates, etc.)		
			d41c_C. Physical violence committed by criminals.		

Table A3: codification of variables relative to the quality of physical environment

EWCS question	Variable attributes	Score	ECCTS question	Variable attributes	Score
q23a_Are you exposed at work to vibrations from hand tools, machinery, etc.?	All of the time Almost all of the time Around ¾ of the time Around half of time Around ¼ of the time Almost never Never	0 0 0 0 0 0 1	*c29d_How often are you exposed to vibrations?*	More than ½ to all time Between ¼ - ½ time Less tan ¼ of the time Never	0 0 0 1
q23b_Are you exposed at work to noise so loud that you would have to raise your voice to talk to people?			*c29c_How often are you exposed to noise?*		
q23c_Are you exposed at work to high temperatures which make you perspire even when not working?			*c29a_How often are you exposed to extreme temperatures?*		
q23d_Are you exposed at work to low temperatures whether indoors or outdoors?					
q23e_Are you exposed at work to breathing in smoke, fumes (such as welding or exhaust fumes), powder or dust (such as wood dust or mineral dust), etc.?			*c29g_How often you are exposed to chemicals in the breathing air as dust, smoke, aerosol?*		
q23h_Are you exposed at work to tobacco smoke from other people?			*c29h_How often are you exposed to tobacco smoke?*		
q23i_Are you exposed at work to handling or being in direct contact with materials which can be infectious, such as waste, bodily fluids, laboratory materials, etc.?			*c29e_How often are exposed to the manipulation of harmful / toxic substances?*		
q24a_Does your main paid job involve tiring or painful positions?			*c33b_How often do you have to work in uncomfortable postures?*		
q24c_Does your main paid job involve carrying or moving heavy loads?			*c31a_In your job how often do you handle heavy loads?*		
q24d_Does your main paid job involve standing?			*c30a_What is your usual work position and how often you maintain it? Standing*		
q24e_Does your main paid job involve repetitive hand or arm movements?			*c31b_In your job how often you perform repetitive movements?*		

Table A4: codification of variables relative to work intensity

EWCS question	Variable attributes	Score	ECCTS question	Variable attributes	Score
q45a_And, does your job involve working at very high speed?	All of the time Almost all of the time Around ¾ of the time Around half of the time Around ¼ of the time Almost never Never	1.000 0.833 0.667 0.500 0.333 0.167 0.000	*c35a_How often do you need to work very fast?*	Always Often Sometimes Rarely Never	1.00 0.75 0.50 0.25 0.00
q45b_And, does your job involve working to tight deadlines?			*c35b_How often do you need to work to strict and tight deadlines?*		
q46d_On the whole, is your pace of work dependent, or not, on automatic speed of a machine or movement of a product?	Yes No	1 0	*c36a_How often the factors that determine your pace of work are the automatic speed of machines or the movement of products?*	Always Often Sometimes Rarely Never	1 1 1 0 0
q46a_On the whole, is your pace of work dependent, or not, on the work done by colleagues?			*c36b_How often the factors that determine your pace of work are the speed of work of colleagues?*		
q46b_On the whole, is your pace of work dependent, or not, on direct demands from people such as customers, passengers, pupils, patients, etc.?			*c36c_How often the factors that determine your pace of work are the direct demands from people related to your job (customers, users…)?*		
q46c_On the whole, is your pace of work dependent, or not, on numerical production targets or performance targets?			*c36d_How often the factors that determine your pace of work are the goals and/or quantity of goods and/or services to achieve?*		
q46e_On the whole, is your pace of work dependent, or not, on the direct control of your boss?			*c36f_How often the factors that determine your pace of work are the direct control of your boss*		
q51g_For each of the following statements, please select the response which best describes your work situation: You have enough time to get the job done.	Always Most of the time Sometimes Rarely Never	0.00 0.25 0.50 0.75 1.00	*c35c_How often do you have enough time to do your job?*	Always Often Sometimes Rarely Never	0.00 0.25 0.50 0.75 1.00
q51p_For each of the following statements, select the response which best describes your situation: Your job requires that you hide your feelings.	Always Most of the time Sometimes Rarely Never	1.00 0.75 0.50 0.25 0.00	*c34d_How often does the following occur? You need to hide your own emotions in the workplace.*	Always Often Sometimes Rarely Never	1.00 0.75 0.50 0.25 0.00

Table A5: codification of variables relative to skills and discretion

EWCS question	Variable attributes	Score	ECCTS question	Variable attributes	Score
q61a_Over the past 12 months, have you undergone any of the following types of training to improve your skills or not? Training paid for or provided by your employer or by yourself if self-employed.	Yes No	1 0	*c37b_How often do you do the following? Receive information and training from the company.*	Always Often Sometimes Rarely Never	1 1 1 0 0
q49e_Generally, does your main paid job involve complex tasks?			*c34c_ How often does the following occur? Perform complex, complicated or difficult tasks.*		
q50a_Are you able to choose or change your order of tasks?			*c38a_How often can you decide on the order of tasks?*		
q50b_Are you able to choose or change your methods of work?			*c38b_How often can you decide on the method of work?*		
q50c_Are you able to choose or change your speed or rate of work?			*c38c_How often can you decide on the pace of work?*		
q51i_Please select the response which best describes your work situation: You are able to apply your own ideas in your work.	Always Often Sometimes Rarely Never	1.00 0.75 0.50 0.25 0.00	*c37f_How often do you do the following? You can apply your own ideas in your work.*	Always Often Sometimes Rarely Never	1.00 0.75 0.50 0.25 0.00
ef1_What is the highest level of education or training that you have successfully completed?	Pre-primary education Primary education Lower secondary Upper secondary Post-secondary First stage of tertiary Second stage of tertiary	0 1 2 2 3 3 3	*p4_What is the last year of study that you completed?*	Unschooled Primary: 1 Primary: 2 Primary: 3 Primary: 4 Primary: 5 Primary: 6 Secondary: 1 Secondary: 2 Secondary: 3 Secondary: 4 Secondary: 5 Secondary: 6 University: 1 University: 2 University: 3 University: 4 University: 5 University: 6	0 1 1 1 1 1 1 2 2 2 2 2 2 3 3 3 3 3 3
q3_What do you mainly do in your job?	2-digit ISCO 2008 (43 levels)	-	*p5_What type of tasks do you perform in your occupation?*	2-digit ISCO 2008 (43 levels)	-

Table A.6. Descriptive statistics of the harmonised Earnings, WTQ and IJQ indices, by region

	EARNINGS		Working Time Quality (WTQ)		Intrinsic Job Quality (IJQ)	
	C. America	Europe	C. America	Europe	C. America	Europe
Mean	2.63	3.12	44.3	48.4	59.7	59.9
Median	2.64	3.18	41.7	50.0	60.0	60.6
SD	0.31	0.32	24.3	24.3	12.6	14.8
IQR	0.40	0.38	37.5	29.2	17.3	20.8
Missing	1074	6496	68	58	1	3

Source: author's elaboration from 2010 EWCS 2010 and 2011 ECCTS.

List of interviews by country

Table A.7 List of interviews conducted by date, country, sector and institutional affiliation

ID	Date	Country	Sector	Institution
1	19-Sep-16	PAN	NGO	Sistema de Información y Análisis Laboral para América Latina y el Caribe (OIT-SIALC)
2	20-Sep-16	PAN	Workers	Convergencia Sindical (CS)
3	20-Sep-16	PAN	Government	Dirección Planificación - Ministerio del Trabajo y Desarrollo Laboral (MITRADEL)
4	27-Sep-16	CRI	Workers	Asociación Nacional de Empleados Públicos y Privados (ANEP)
5	28-Sep-16	CRI	Government	Ministerio del Trabajo y Seguridad Social (MTSS)
6	28-Sep-16	CRI	Government	Inspección del Trabajo - Ministerio del Trabajo y Seguridad Social (MTSS)
7	29-Sep-16	CRI	Workers	Sindicato de Trabajadores y Trabajadoras de la Educación Costarricense (SEC)
8	29-Sep-16	CRI	Employers	Unión Costarricense de Cámaras y Asociaciones del Sector Empresarial Privado (UCCAEP)
9	03-Oct-16	CRI	Academy	Facultad Latinoamericana de Ciencias Sociales (FLACSO)
10	04-Oct-16	CRI	Government	Corte Suprema de Justicia
11	04-Oct-16	CRI	Academy	Universidad de Costa Rica
12	05-Oct-16	CRI	NGO	Oficina Subregional OIT
13	06-Oct-16	CRI	Academy	Universidad de Costa Rica
14	07-Oct-16	CRI	NGO	Fundación Para la Paz y la Democracia (FUNPADEM)
15	07-Oct-16	CRI	NGO	Programa Estado de la Nación (PEN)
16	17-Oct-16	NIC	Academy	Independent Consultant
17	18-Oct-16	NIC	Workers	Confederación de Unificación Sindical de Nicaragua (CUS)
18	18-Oct-16	NIC	Academy	Universidad Centroamericana (UCA)
19	19-Oct-16	NIC	Workers	Confederación Unitaria de Trabajadores (CUT)
20	20-Oct-16	NIC	Academy	Universidad Centroamericana (UCA)
21	20-Oct-16	NIC	Employers	Consejo Superior de la Empresa Privada (COSEP)
22	21-Oct-16	NIC	NGO	Fundación Nicaragüense para el Desarrollo Económico y Social (FUNIDES)
23	24-Oct-16	SLV	Workers	Movimiento Unitario Sindical y Gremial de El Salvador (MUSYGES)
24	25-Oct-16	SLV	Government	Ministerio del Trabajo y Protección Social (MTPS)
25	27-Oct-16	SLV	NGO	Grupo de Monitoreo Independiente de El Salvador (GMIES)
26	31-Oct-16	SLV	Academy	Universidad Católica de El Salvador (UNICAES)
27	01-Nov-16	SLV	Workers	Confederación Sindical de Trabajadores Salvadoreños (CSTS)
28	01-Nov-16	SLV	Employers	Cámara de Comercio e Industria de El Salvador (CAMARASAL)
29	07-Nov-16	GTM	NGO	Oficina Internacional del Trabajo (OIT)
30	08-Nov-16	GTM	Workers	Confederación de Unidad Sindical de Guatemala (CUSG)
31	08-Nov-16	GTM	Workers	Central General de Trabajadores de Guatemala (CGTG)
32	08-Nov-16	GTM	NGO	Asociación de Investigación y Estudios Sociales (ASIES)
33	09-Nov-16	GTM	Workers	Independent Labour Lawyer
34	10-Nov-16	GTM	Government	Independent Labour Lawyer (former Government Assistant)
35	11-Nov-16	GTM	Government	Ministerio Trabajo y Previsión Social Guatemala (MINTRAB)
36	15-Nov-16	GTM	Academy	Universidad del Istmo (UNIS)-Facultad Derecho
37	18-Nov-16	GTM	Academy	Universidad del Istmo (UNIS)-Escuela Negocios
38	18-Nov-16	GTM	Employers	Asociación de la Industria de Vestuario y Textiles (VESTEX)
39	22-Nov-16	HND	Government	Secretaría de Trabajo y Seguridad Social de Honduras (STSS)
40	23-Nov-16	HND	Academy	Universidad Nacional de Honduras (UNAH)
41	23-Nov-16	HND	Government	Instituto Nacional de Formación Profesional (INFOP)
42	25-Nov-16	HND	Workers	Former President Federación Unitaria de Trabajadores de Honduras (FUTH)
43	25-Nov-16	HND	Employers	Consejo Hondureño de la Empresa Privada (COHEP)
44	30-Nov-16	PAN	Workers	Confederación Nacional de Unidad Sindical Independiente (CONUSI)
45	30-Nov-16	PAN	Academy	Independent Labour Lawyer
46	01-Dec-16	PAN	Academy	Universidad Las Américas-Programa Salud, Trabajo y Ambiente en América Central (SALTRA)
47	01-Dec-16	PAN	Academy	Universidad de Panamá-Programa Salud, Trabajo y Ambiente en América Central (SALTRA)
48	01-Dec-16	PAN	Employers	Fundación del Trabajo (FUNTRAB)
49	02-Dec-16	PAN	Employers	Consejo Nacional de la Empresa Privada (CONEP)
50	02-Dec-16	PAN	Academy	Universidad de Panamá

Descriptive statistics of job quality indices

Table A.8. Descriptive statistics of job quality indices by country

	GTM	SLV	HND	NIC	CRI	PAN	Central America
Earnings (logged monthly US$)							
Lower quartile	2.42	2.47	2.38	2.34	2.67	2.74	2.44
Median	2.62	2.60	2.58	2.52	2.86	2.92	2.64
Upper quartile	2.82	2.78	2.79	2.72	2.98	3.04	2.84
IQR	0.40	0.30	0.41	0.38	0.31	0.30	0.40
Mean	**2.59**	**2.63**	**2.57**	**2.52**	**2.82**	**2.89**	**2.63**
Std. Dev.	0.29	0.25	0.32	0.31	0.30	0.24	0.31
Missing (n)	352	5	7	22	611	77	1074
Working time quality							
Lower quartile	37.5	37.5	37.5	37.5	37.5	37.5	37.5
Median	50.0	50.0	45.8	50.0	50.0	50.0	50.0
Upper quartile	68.8	68.8	62.5	68.8	68.8	62.5	68.8
IQR	31.3	31.3	31.3	31.3	31.3	31.3	31.3
Mean	**53.4**	**53.9**	**49.6**	**52.7**	**52.9**	**50.1**	**52.4**
Std. Dev.	20.8	18.7	21.5	21.6	21.2	21.8	20.9
Missing (n)	2	0	1	0	0	14	17
Intrinsic job quality							
Lower quartile	59.4	56.5	56.1	61.5	61.2	61.4	59.0
Median	67.9	65.0	67.7	70.8	71.3	69.6	68.3
Upper quartile	74.4	71.3	75.1	77.7	78.9	76.1	75.2
IQR	15.0	14.7	18.9	16.3	17.7	14.7	16.3
Mean	**65.6**	**63.1**	**65.0**	**68.1**	**69.1**	**68.0**	**66.1**
Std. Dev.	12.6	11.9	13.0	13.7	12.8	11.2	12.8
Missing (n)	0	0	0	0	0	0	0

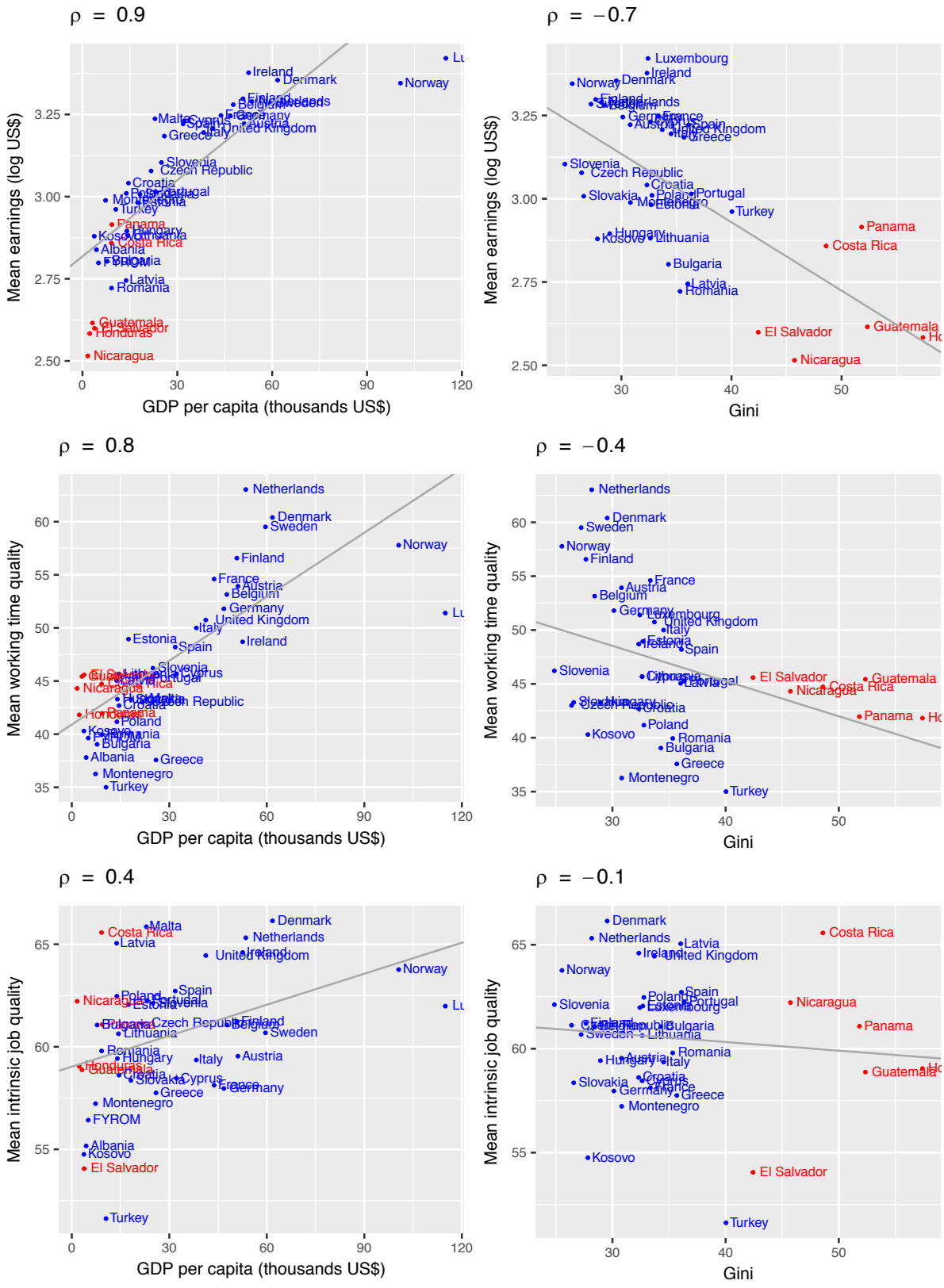
Note: figures are weighted to consider sample probabilities.
Source: authors' elaboration from 2011 ECCTS.

Table A.9. OLS regression coefficients of job quality on country

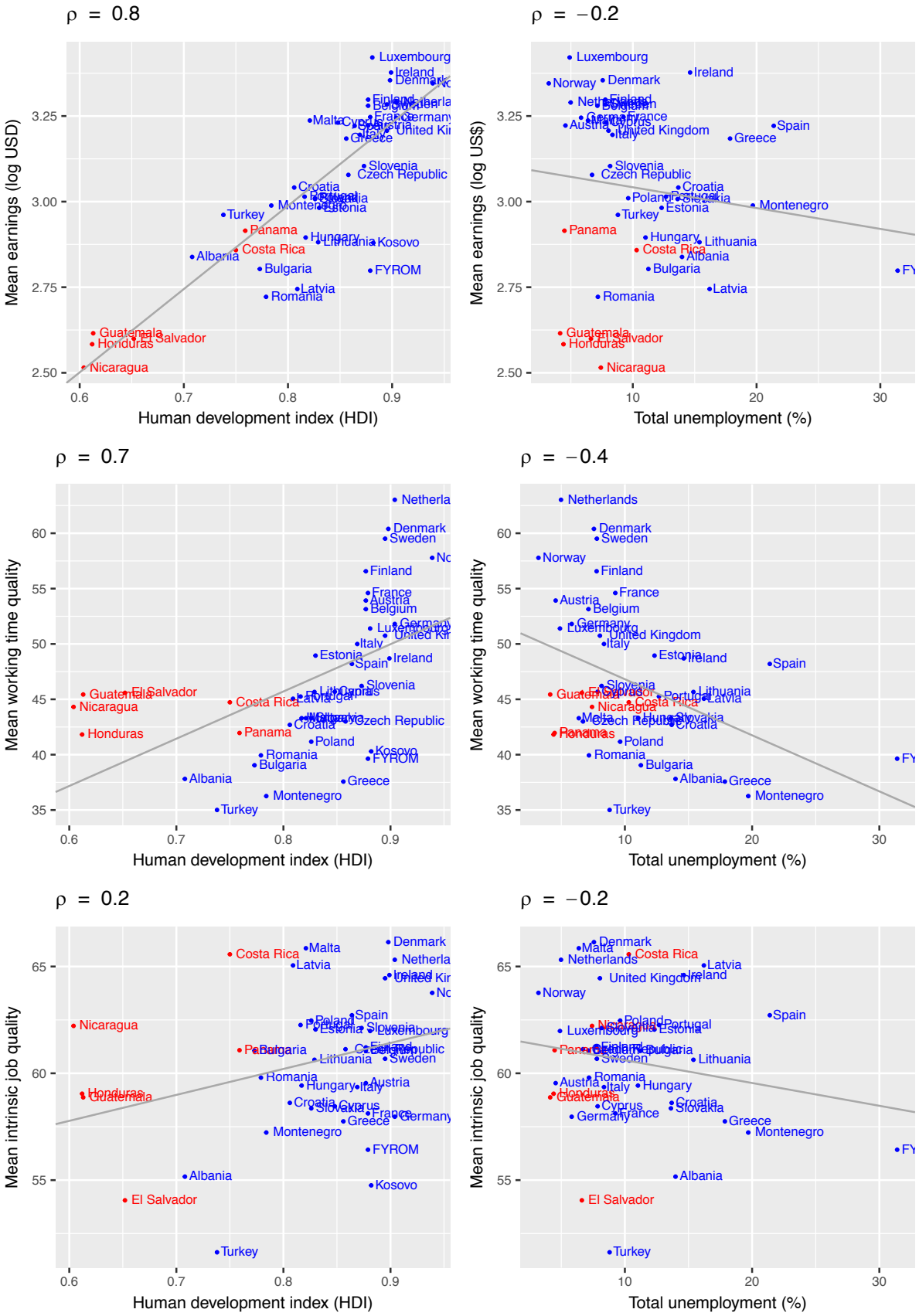
	Earnings (log)		WTQ		IJQ	
	Without controls	With controls	Without controls	With controls	Without controls	With controls
Costa Rica	-.075***	-.036***	2.772***	2.232**	1.119**	.046
	(.013)	(.012)	(.871)	(.892)	(.526)	(.513)
El Salvador	-.267***	-.195***	3.752***	3.211***	-4.918***	-6.660***
	(.012)	(.011)	(.825)	(.853)	(.499)	(.491)
Guatemala	-.300***	-.192***	3.408***	2.016**	-2.430***	-4.545***
	(.011)	(.010)	(.745)	(.788)	(.450)	(.453)
Honduras	-.319***	-.215***	-.557	-1.552*	-3.054***	-5.339***
	(.011)	(.011)	(.805)	(.838)	(.486)	(.482)
Nicaragua	-.374***	-.297***	2.503***	.942	.054	-1.777***
	(.012)	(.011)	(.818)	(.843)	(.494)	(.485)

Note: *p < .05; **p < .01; ***p < .001. Displayed are the unstandardized regression coefficients for each dimension of job quality on country (Panama as reference category), gender (men, women), age group (younger than 30, 30-49, 50-59, 60 and older), occupation (high skilled white collar, low skilled white collar, high skilled blue collar, low skilled blue collar), type of industry (primary, secondary or tertiary sector), and firm size (fewer than 5 workers, 5-10, 11-49, 50 or more workers). These can be interpreted as the changes in the average JQ that would involve working in that country as compared to working in the country of reference. Standard errors are in parenthesis.
Source: author's elaboration from 2011 ECCTS.

Correlation plots between job quality and developmental indicators *circa* 2011



Source: author's elaboration from ECCTS 2011, EWCS 2010, and World Bank (2018).



Source: author's elaboration from ECCTS 2011, EWCS 2010, and World Bank (2018).